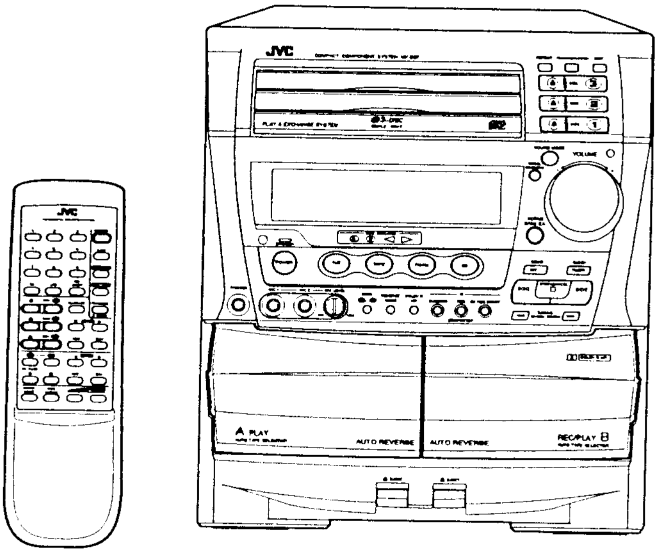
JVC

SERVICE MANUAL

COMPACT COMPONENT SYSTEM

CA-D5T



PICK UP	OPT-6S
LSI	MN35510

Area Suffix

A .... Australia
BS .... the U.K.
EF .... Continental Europe
EN .... Scandinavia
G .... Germany
GI .... Italy
VX .... East Europe
US .... Singapore
UT .... Taiwan
UP .... Korea
UB .... Hong Kong
U .... Other Area

COMPACT
disc
DIGITAL AUDIO

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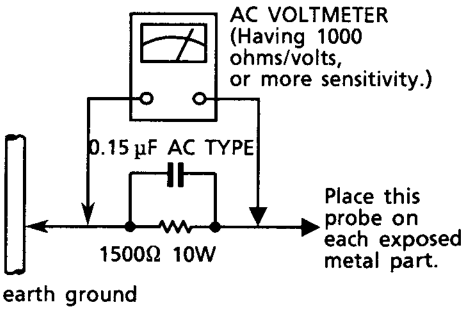
No.20567
Mar.1996

Safety Precautions

1. The design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute repalcement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage currnet check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500Ω 10 W resistor paralleled by a 0.15 µF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and meausre the AC voltage across the resistor.
     Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).


AC VOLTMETER
(Having 1000 ohms/volts, or more sensitivity.)
0.15 µF AC TYPE
Place this probe on each exposed metal part.
1500Ω 10W
Good earth ground

Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

Important for Laser Products

1. CLASS 1 LASER PRODUCT
2. DANGER : Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. CAUTION : There are no serviceable parts inside the Laser Unit. Do not disassemble the Laser Unit. Replace the complete Laser Unit if it malfunctions.
4. CAUTION : The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.
5. CAUTION : If safety switches malfunction, the laser is able to function.
6. CAUTION : Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

VARNING : Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.

VARO : Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.

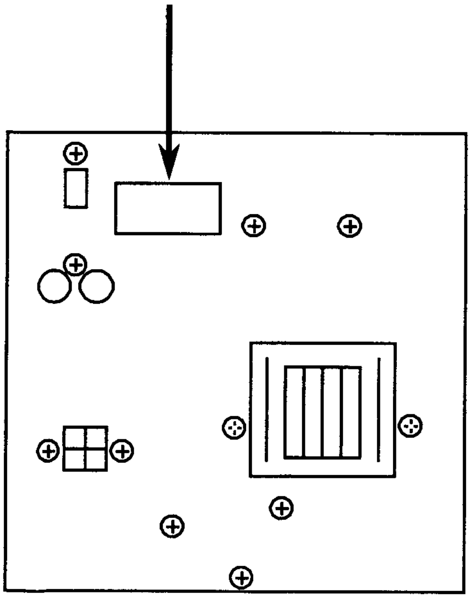
ADVARSEL : Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

ADVARSEL : Usynlig laserstråling ved åpning, når sikkerhetsbryteren er avslott. unngå utsettelse for stråling.

REPRODUCTION AND POSITION OF LABELS

CLASS 1
LASER PRODUCT

CLASSIFICATION LABEL
(Except for the U. S. A. and Canada)



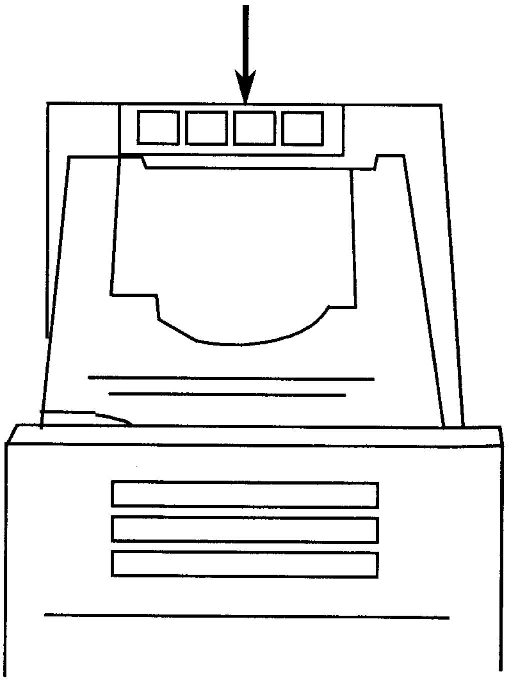
WARNING LABEL
(Except for the U. S. A.)

DANGER: invisible laser radiation when open and interlock failed or defeated. AVOID DIRECT EXPOSURE TO BEAM. (e)

VARNING: Osynling laserstråling når denna del å öppnad och spärren år urkoppled. Betrakta ej stålen. (s)

ADVARSEL: Usynling laserstråling ved åbning, når sikkerhedsafbrydere er ude at funktion. Undgåudsættelse for stråling. (d)

VARO: Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen. (f)



Getting Started

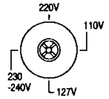
Accessories

Check to be sure you have all of the following things, which are supplied with the CA-D5T.

AM Loop Antenna (1)
Remote Control (1)
Batteries (2)
FM Wire Antenna (1)
AC Plug Adaptor (except for Hong Kong) (1)

If any are missing, contact your dealer immediately.

Set the VOLTAGE SELECTOR Switch



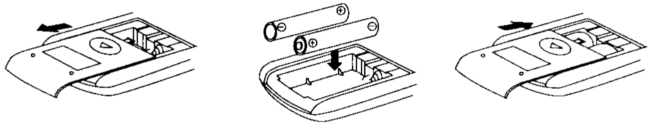
To avoid damaging the CA-D5T, set the voltage before plugging in the Unit.

- ☐ Set the correct voltage for your area with the VOLTAGE SELECTOR switch on the back panel of the CA-D5T. Use a screwdriver to rotate the selector so the number the arrow is pointed at is the same as the voltage

How To Put Batteries In the Remote Control

Match the polarity (+ and –) on the batteries with the + and – markings in the battery compartment.

R6P (SUM-3)/AA (15F)

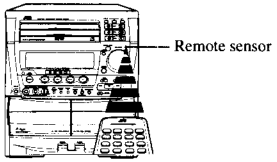


CAUTION: Handle batteries properly.
To avoid battery leakage or explosion:

- Remove batteries when the Remote Control will not be used for a long time.
- When you need to replace the batteries, replace both batteries at the same time with new ones.
- Don't use an old battery with a new one.
- Don't use different types of batteries together.

Using the Remote Control

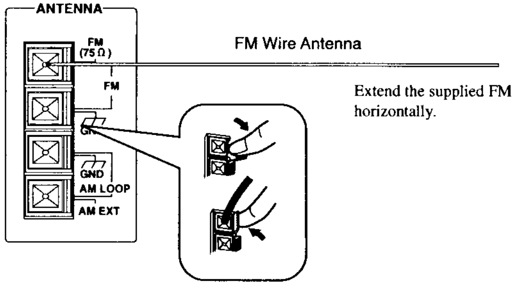
The Remote Control makes it easy to use many of the functions of the CA-D5T from a distance of up to 7 m (23 feet) away.
You need to point the Remote Control at the remote sensor on the CA-D5T's front panel.



CAUTION: Make all connections before plugging the Unit into an AC power outlet.

Connecting the FM Antenna

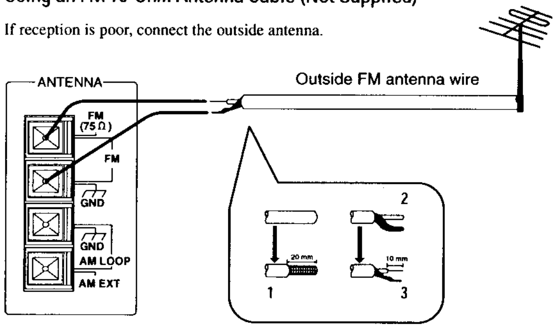
Using the Supplied Feeder Antenna



Extend the supplied FM Wire Antenna horizontally.

Using an FM 75-Ohm Antenna Cable (Not Supplied)

If reception is poor, connect the outside antenna.

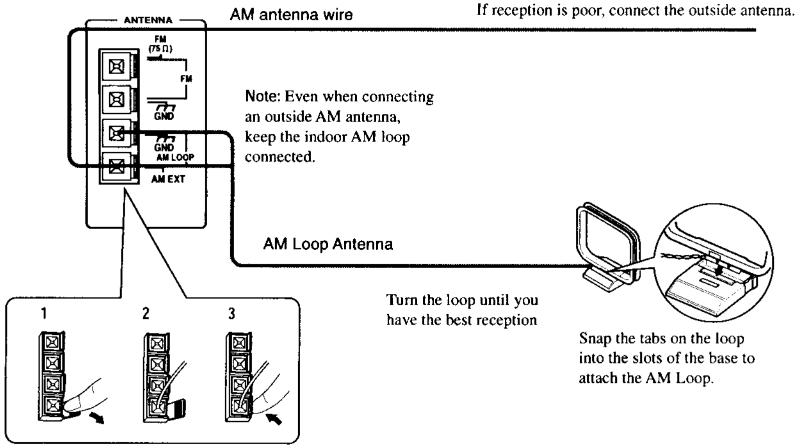


Before attaching a 75 ohm coaxial lead (the kind with a round wire going to an outside antenna), disconnect the supplied FM Wire Antenna.

CAUTION: To avoid noise, keep antennas away from metallic parts of the CA-D5T, connecting cord and the AC power cord.

CAUTION: Make all connections before plugging the Unit into an AC power outlet.

Connecting the AM Antenna



If reception is poor, connect the outside antenna.

Note: Even when connecting an outside AM antenna, keep the indoor AM loop connected.

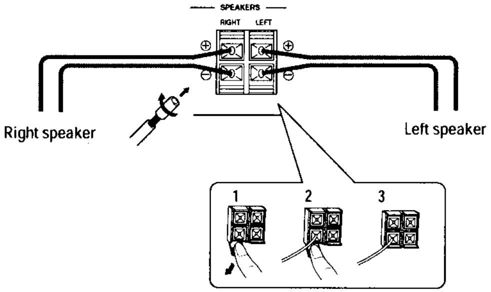
Turn the loop until you have the best reception

Snap the tabs on the loop into the slots of the base to attach the AM Loop.

Connecting the Speakers *(Please refer to instructions for speakers as will when you connect speakers.)*

For each speaker connect one end of the speaker wire to the speaker terminals on the back of the CA-D5T and one end to the speaker.

1. Open each of the terminals and insert the speaker wires firmly(be sure to remove the insulation at the end of each wire first), then close the terminals.
2. Connect the red (+) and black (–) terminals of the right side speaker to the red (+) and black (–) terminals marked RIGHT on the CA-D5T.
   Connect the red (+) and black (–) terminals of the left side speaker to the red (+) and black (–) terminals marked LEFT on the CA-D5T.

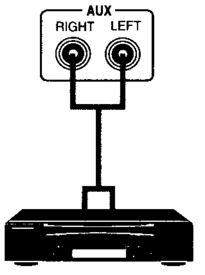


IMPORTANT: Use speakers with the correct impedance only. The correct impedance is indicated on the back panel.

CAUTION: If a TV is installed near speakers, the TV may display irregular colors. In this case, set the speakers away from the TV.

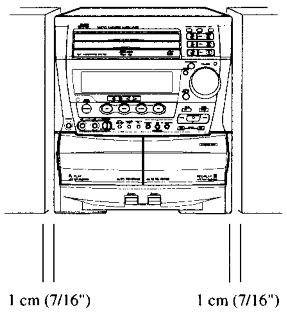
CAUTION: Make all connections before plugging the Unit into an AC power outlet.

Connecting Auxiliary Equipment



VCR or other equipment
To listen to these sources, press the AUX button

Laying Out the Unit



- Leave a space of at least 1 cm on both sides of the Unit and at least 10 cm at the back, for ventilation.

Now you can plug the AC power cord into the wall outlet, and your CA-D5T is at your command!

DEMO Mode

When the CA-D5T is connected to an AC power outlet, a DEMO mode displaying some of the system's features starts.
The DEMO display cycles through the following items repeatedly.

- Scrolling display of "DEMO MODE".
- Demo of IllumiMagic COMPU PLAY buttons.
- Source Indicator.
- DISC-1 to DISC-3 Indicator.
- Demo of Live Surround effects and S.E.A effects.
- Demo of CD RANDOM PLAY.
- Demo of ACTIVE BASS EXTENSION.
- Demo of pre-setting of up to 40 FM/AM channels.

The DEMO display stops when the power is turned on.
The DEMO display will start again about one minute after the CA-D5T is set to STANDBY mode (the red STANDBY indicator is on).

Turning the DEMO Display ON and Off

The DEMO display can be turned on and off when the system is in STANDBY mode.
To turn the DEMO display off, press the DEMO button while in DEMO mode. The display changes from the DEMO display to the clock display after "DEMO OFF" light up on the display.
To turn the DEMO display on, press the DEMO button. The display changes from the clock display to the DEMO display.

Note: The DEMO display automatically starts when the power cord is inserted into a wall outlet. To stop the DEMO display when the power cord is inserted into the wall outlet, press the DEMO button to turn the DEMO display off.

COMPU PLAY

COMPU PLAY is JVC's feature that lets you control the most used functions of the CA-D5T with a single touch.
What COMPU PLAY does is to automatically turn on the power and start the function you have specified. With IllumiMagic COMPU PLAY, when you approach the system to use a function, the sensor detects your action, illuminates the function buttons and displays "PRESS ANY BLINKING KEY" on the display. Not all COMPU PLAY buttons blink with the IllumiMagic COMPU PLAY function.

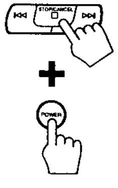
IllumiMagic COMPU PLAY buttons
The CD, FM/AM, TAPE, AUX, DISC-1, DISC-2 and DISC-3 buttons on the Unit.

Buttons that do not blink
On the Unit
- CD Player ≜ buttons.

On the Remote Control
- AUX button
- TUNER button
- CD player Play (►) button
- CD Player DISC-1 to DISC-3 buttons.
- CD player Open/Close (≜) button
- Cassette player Play (◄ or ►) buttons

The functions performed when the you use the IllumiMagic COMPU PLAY buttons are explained in the relevant section for each function.

Stopping the IllumiMagic COMPU PLAY buttons blinking and turning the guide display off



When the system is in STANDBY mode, press the POWER button on the CA-D5T while holding down the STOP/CANCEL ■ button.
"GUIDE OFF" appears in the display.

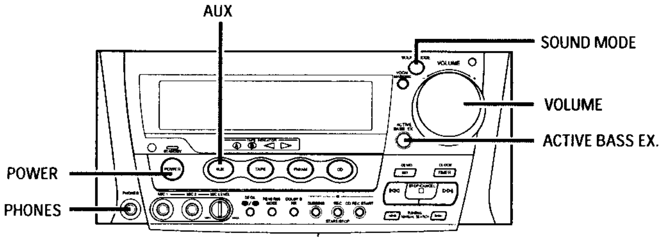
GUIDE OFF

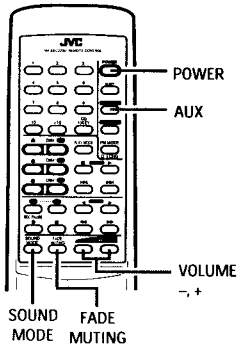
To start IllumiMagic COMPU PLAY blinking again, repeat this operation.
"GUIDE ON" appears in the display.

GUIDE ON

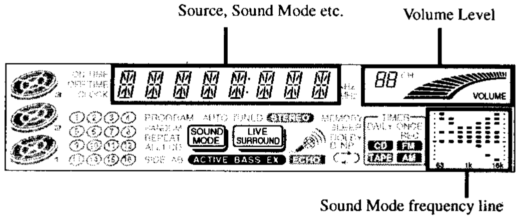
Note: IllumiMagic COMPU PLAY buttons may interfere with the remote control operation of TV's and other remote controlled equipment. If this occurs, turn off the IllumiMagic COMPU PLAY blink function

Using the Amplifier



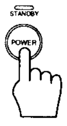


Display



When the CA-D5T is being used, the display shows other items as well. However, we have only shown the items described in this section.

Turning Power



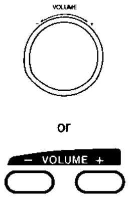
Turning the CA-D5T On

Press the POWER button.
The displays come on and the Standby indicator goes out.
The CA-D5T comes on ready to do whatever it was doing when the power was last shut off.
- ☐ If the last thing you were doing was listening to a tape in Deck B, you are now ready to listen to a tape again in Deck B, or you can change to another source.
- ☐ If you were listening to the Tuner last, the Tuner comes on playing the station it was last set to.

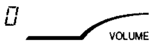
Turning the CA-D5T Off

Press the POWER button again.
The Standby indicator lights up and the displays blank, except for the clock display.
- ☐ Some power (17 watts) is always consumed even though power is turned off (called Standby Mode).
- ☐ To switch off the Unit completely, unplug the AC power cord from the AC outlet. When you unplug the AC power cord, the clock will reset to 0:00 right away, and preset Tuner stations will be erased after a few days.

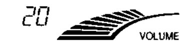
Adjusting the Volume



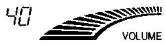
Turn the VOLUME control clockwise to increase the volume or counterclockwise to decrease it.
Turning the VOLUME control quickly also adjusts the volume level quickly.
When use the Remote Control, press the VOLUME + button to increase the volume or press the VOLUME – button to decrease it.



Display when the volume level is set to 0



Display when the volume level is set to 20



Display when the volume level is set to its maximum level

For private listening
Connect a pair of headphones to the PHONES jack. No sound comes out of the speakers. Be sure to turn down the volume before connecting or putting headphones.

CAUTION: The Volume cannot be adjusted while the Unit is in STANDBY mode. DO NOT turn on the Unit and/or start playing any source without setting the VOLUME control to 0; otherwise, the sudden blast of sound can damage your hearing, speakers and/or headphones.

FADE MUTING

FADE MUTING Function

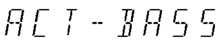
Set the Volume Level to 0 by pressing the FADE MUTING button on the Remote Control. Press this button again to restore the Volume Level to its previous level.

Reinforcing the Bass Sound

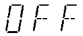
The richness and fullness of the bass sound is maintained regardless of how low you set the volume. You can use this effect only for playback.

ACTIVE BASS EX.

To get the effect, press the ACTIVE BASS EX. (Active Bass Extension) button. "ACT-BASS" appears in the display and the ACTIVE BASS EX. indicator lights up.



To cancel the effect, press the button again. The message "OFF" appears in the display and the ACTIVE BASS EX. indicator goes out.



Sound Modes

The CA-D5T has some preset sound effects that give you control of the way your music sounds, so you can tailor it for your room and for the quality of the source. We can give you some idea of how each one affects the music, but the only way to really tell is to try them yourself.
You can use only one effect at a time, selecting from the Live Surround or S.E.A. effects is only possible for playback mode.

Live Surround Effects

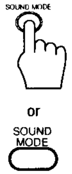
With these effects, the sound coming from only two speakers approaches the quality of sound from four speakers.

D-CLUB (Dance Club)	Increases resonance and bass.
HALL	Adds depth and brilliance to the sound, like in a concert hall.
STADIUM	Adds clarity and spreads the sound, like in an outdoor stadium.

Preset S.E.A. (Sound Effect Amplifier) Effects

Adjustments of frequency range levels have been preset as three S.E.A. effects.

ROCK	Boosts low and high frequencies.
POPS	Good for vocal music.
CLASSIC	Set for wide and dynamic sound stereo systems.

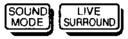


To get an effect, press the SOUND MODE button repeatedly until the Sound Mode you want appears in the display.
Each time you press the button, the modes change as follows:

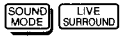
→ D. CLUB → HALL → STADIUM → ROCK → POPS → CLASSIC → OFF ↵

❑ The display changes to display appropriate information for the Sound Mode you have selected.

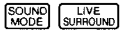
When D-CLUB, HALL or STADIUM (Live Surround effects) are selected.



When ROCK, POPS or CLASSIC (S.E.A. effects) are selected.



When Sound Mode OFF is selected.

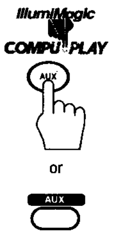


To cancel an effect, press the Sound Mode button until "OFF" appears in the display.

Listening To Optional Equipment

By playing the sound from auxiliary equipment through the CA-D5T, you can gain control over how the music or program sounds. Once the connected equipment is playing through the CA-D5T, you can apply the sound effects, make recordings, or listen with the headphones.

❑ First make sure that the optional equipment is properly connected to the CA-D5T. (See page 6).

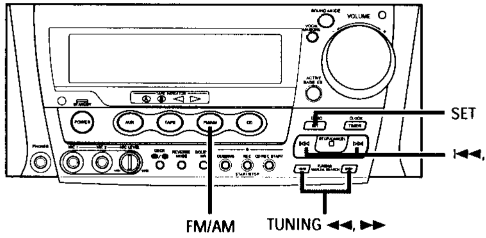


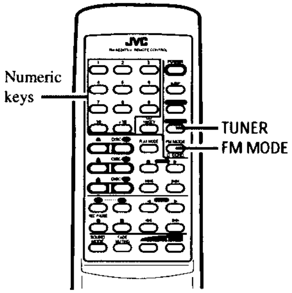
1. Set the VOLUME control to 0.
2. Press the AUX button.
   The Unit automatically turns on and "AUX" lights up on the display.

3. Start playing the selected equipment.
4. Adjust the VOLUME control to the desired listening level.
5. Select a sound effect mode, if you wish.

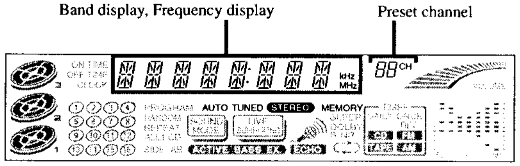
To Cancel the Setting
Change the source by starting any one of the CA-D5T's built-in sound sources, such as the Tuner or CD Player.

Using the Tuner





Display



When the CA-D5T is being used, the display shows other items as well. However, we have only shown the items described in this section.

You can listen to both FM and AM stations. Stations can be tuned in manually, automatically, or from preset memory storage.

- ❑ Before listening to the radio:
  - Check that both the FM and AM antennas are firmly connected. (See page 4 and 5).

Setting the AM Tuner Interval Spacing

Some countries space AM stations 9 kHz apart, and some countries use 10 kHz spacing. Europe, the U.K., Australia, and some other areas use 9 kHz spacing, while Canada, the United States, and some other Western Hemisphere countries use 10 kHz spacing.

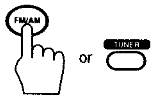
- ❑ When shipped, the CA-D5T is set to 9 kHz spacing.
- ❑ To select the 10 kHz interval, be sure that the power is off and the Unit is plugged into the wall socket. Turn on by pressing the POWER button while holding down the ▶▶| button.
- ❑ To change back to 9 kHz, be sure that the power is off and the Unit is plugged into the wall socket. Turn on by pressing the POWER button while holding down the |◀◀ button.

One Touch Radio

Just press the FM/AM button (or the TUNER button on the Remote Control) to turn on the Unit and start playing the most recent station tuned in.

- ❑ You can switch from any other sound source to the radio by pressing the FM/AM button (or the TUNER button on the Remote Control).

Tuning In a Station



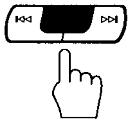
Press the FM/AM button (or the TUNER button on the Remote Control) to turn on the radio. The frequency of the previously selected channel appears on the display.

Switching between Frequency Bands

Press the FM/AM button.

Each time you press the button, the band alternates between FM and AM.

Three ways to select a station



- ❑ Press the TUNING ◀◀ or ▶▶ button on the Unit repeatedly to move from frequency to frequency until you find the one you want. (Manual Tuning).

OR

- ❑ Hold down the TUNING ◀◀ or ▶▶ button on the Unit, the frequency starts changing on the display. When a station is tuned in, "TUNED" lights up on the display and the frequency stops changing. (Auto Tuning).

OR

- ❑ (Possible only after presetting stations.)

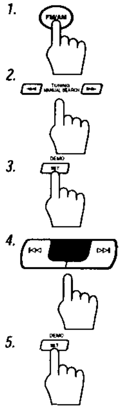
  Press once and release the |◀◀ or ▶▶| button on the Unit to go to the next preset station, or hold the |◀◀ or ▶▶| button on the Unit to cycle through the preset stations: release the button when the preset station you want shows on the display.

  You can also use the Remote Control to tune in preset channels:

  1. **Press the TUNER button so that you can receive the most recent station tuned in.**
  2. **Select the station by entering the preset number in the numeric keys of the Remote Control.**

  - ❑ Example: for channel 5, press 5. For channel 15, press +10 then 5. For channel 20, press +10, then 10. For channel 32, press +10 three times, then 2.

Presetting Stations



You can store up to 40 of your favourite radio stations (FM and AM) in memory, giving you quick, easy access to the stations.

1. **Select a band by pressing the FM/AM button.**
2. **Press the TUNING ◀◀ or ▶▶ button on the Unit to tune in a station.**
3. **Press the SET button.**

   The SET button indicator comes on, the preset number and "MEMORY" appears in the display and blinks for five seconds.

   - ❑ During these five seconds while blinking, you can assign a channel number to the station and enter it into the memory.
4. **Select a channel number by pressing the |◀◀ or ▶▶| button on the Unit until you find the channel number you want.**
5. **Press the SET button and the station will be assigned to the channel number showing on the display.**

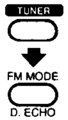
   "MEMORY" appears in the display.

   MEMORY

   - ❑ If a station has been previously stored using the same channel number, this will be erased and the newly selected station will be stored.
   - ❑ If the "MEMORY" indicator goes off, start again from step 3.
6. Repeat steps 1 - 5 for each station you want to store in memory with a preset number.

CAUTION: If the Unit is unplugged or if a power failure occurs, the preset stations will be erased in a few days. If this happens, preset the stations again.

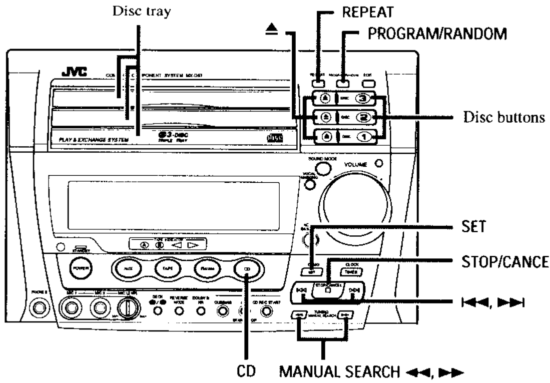
To Change the FM Reception Mode

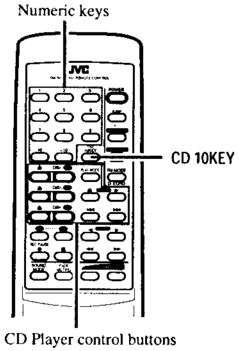

TUNER
FM MODE
D. ECHO

When an FM stereo broadcast is difficult to receive, or there is a lot of noise, press the FM MODE button, after pressing TUNER button, on the Remote Control so that the "AUTO" indicator in the display goes off. The reception will improve but there is no stereo effect. In this monaural mode, noise will be heard while tuning to a station since muting is also cancelled.

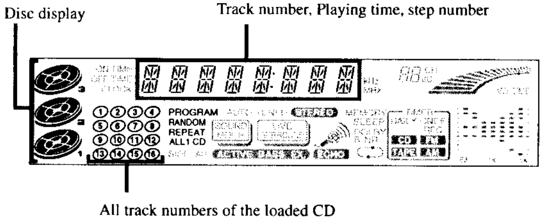
To restore the stereo effect, press the FM MODE button, after pressing the TUNER button, in the Remote Control so that the "AUTO" indicator in the display comes on. If this stereo mode no noise is heard while tuning to a station, and you can listen in stereo when a program is broadcast is stereo.

Using the CD Player

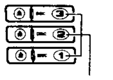

Disc tray
▲
REPEAT
PROGRAM/RANDOM
Disc buttons
SET
STOP/CANCEL ■
⏮, ⏭
CD
MANUAL SEARCH ◀◀, ▶▶


Numeric keys
CD 10KEY
CD Player control buttons

Display


Disc display
Track number, Playing time, step number
All track numbers of the loaded CD

When the CA-D5T is being used, the display shows other items as well. However, we have only shown the items described in this section.



Disc indicator

Disc indicator
Each Disc button has a disc indicator. This indicator is off when the CD Player is checking that there is no disc in the disc tray for the corresponding disc number.
Pressing the ▲ button turns the indicator on.

Disc marker

Disc display
A red marker lights on the disc display for the disc number you have selected. This disc display blinks while a CD is being played.
The center of the disc display is not lit while CD Player is checking that there is no disc in the disc tray for the corresponding disc number.

The CA-D5T's CD Player has an Automatic Changer with 3 disc trays. You can use Continuous, Random, Program or Repeat Play for the discs in DISC-1, DISC-2 and DISC-3. Repeat Play can repeat all the tracks on all the CD's, the tracks on one of the CD's or one track on one CD.
There is also the Tray Lock function, which safely keeps discs in the trays.

Here are the basic things you need to know to play a CD and locate the different selections on it. Each selection is called a track, so when we are talking about locating a track, we are also talking about how you find a certain song or performance.

The Quickest Way To Start a CD Is With the One Touch Operation

The power comes on, and operations are done automatically.

☐ Press the CD button (or the ► button on the Remote Control).
- If there is a CD in the disc tray of the selected (lit) disc number, playback continues from the track where it was interrupted.
- If there is no CD in any of the disc trays, the message "OPEN" appears in the display after a few seconds and the disc tray for the marked disc opens.

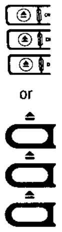
☐ Press a DISC button (1 to 3).
- If there is a CD in the disc tray for the disc number you have selected, playback begins from the first track of that disc. If there is no CD in the disc tray, the message "OPEN" appears in the display after a few seconds and the disc tray opens.

☐ Press the ≜ button.
- The power turns on, and the tray opens automatically.

Basics of Using the CD Player — Continuous Play

You can play the discs continuously in the DISC 1 to DISC 3 trays.

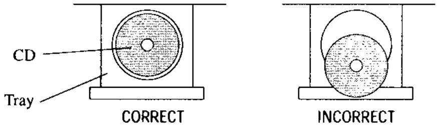
To Insert Discs



1. **Press the ≜ button on the right of the tray you want to insert the disc into.**
The disc tray slides out automatically.

2. **Put a CD, with its label side up, into the tray.**

ATTENTION: To avoid malfunctions when you play a CD, please set the CD in the right place at the center of the tray.



3. **Press the ≜ button to close the tray.**

4. **Repeat steps 1 to 3 to insert other discs into other trays.**
To continue putting discs into other trays, even if a tray is open, by pressing the ≜ button of another disc tray, the open tray will close automatically, and the new disc tray will slide out.

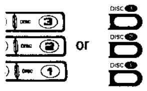
☐ To put an 8 cm CD into a tray, insert it so that it is aligned with the groove in the tray's center.

☐ "OPEN" appears in the display when a tray opens, and "CLOSE" when a tray closes.

Note: When the CD Player is reading a disc, "- - - -" appears in the display. While this is being displayed, the ≜ button or DISC button cannot be used. Once the display changes from "- - - -" to another display, the ≜ button and DISC button can be used.

To Play a Disc

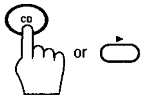
This function plays the disc in the Unit continuously.



1. **Prepare the discs.**

2. **Press the DISC button (1-3) of the disc to play.**
The first track of the selected disc will begin playing.
When the selected disc finishes playing, the next disc will begin playing automatically.
When the last disc has finished playing, the Unit will stop automatically.

☐ When a DISC button is pressed while a tray is open, the open tray will close automatically and Continuous Play playback begins from the first track of the disc.



To use Continuous Play from the first track of the disc selected by the disc marker, you do not need to press a DISC button (1-3), just press the CD button (or ► button on the Remote Control).

Playing order of discs

☐ When playback starts from DISC-1, the playing order is DISC-1 → DISC-2 → DISC-3. When DISC-3 has finished, the CD Player selects DISC-1 (the disc marker is on) and stops.

☐ When playback starts from DISC-2, the playing order is DISC-2 → DISC-3 → DISC-1. When DISC-1 has finished, the CD Player selects DISC-2 (the disc marker is on) and stops.

☐ When playback starts from DISC-3, the playing order is DISC-3 → DISC-1 → DISC-2. When DISC-2 has finished, the CD Player selects DISC-3 (the disc marker is on) and stops.
- If any of the disc trays are empty, the CD Player skips that disc tray and continues through the remaining disc trays in the order shown above.

Note: If there is no CD in disc tray for the DISC button you pressed, the message "OPEN" appears in the display and the disc tray automatically opens.
If there is no disc in the disc tray for the selected disc number, when the CD button (or the ► button on the Remote Control) is pressed, playback begins from the next disc.

To stop play the disc, press the ■ button (or the ■ button on the Remote Control) for the disc number being played.
To stop play and remove the disc, press the ≜ button (or the ≜ button on the Remote Control) for the disc being played.
To pause, press the CD button. The CD button and the Disc display will blink. (The Pause function cannot be used with the button on the Remote Control.)
To cancel pause, press the CD button again. Play continues from the point where it was paused.

RESUME

When the STOP/CANCEL ■ button (or the ■ button on the Remote Control) is pressed during playback, and the source is changed, the track number is memorized even when the power is turned off. The next time the CD button (or the ► button on the Remote Control) is pressed, play resumes from the track where it was interrupted.

☐ To start playback from the first track, press the DISC button.

To Change Discs While Playing

You can replace a CD in a tray not being used, while another CD is playing.

1. **Press the ≜ button of the tray not being used.**
The tray opens.

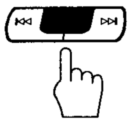
2. **Replace the disc in the tray.**

3. **Press the ≜ button to close the tray.**

To Select a Disc, Track Or Passage Within a Track

1. **Press the DISC button (1-3) for the disc tray containing the track you want to listen to.**

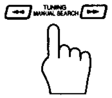
❑ Example: for the third disc, press 3.



2. **Press the |◀◀ or ▶▶| button to select the track.**

The selected track starts playing.

❑ Each time you briefly press and release the |◀◀ or ▶▶| button, the track changes by one.
- Press and release the ▶▶| button to go ahead one track at a time.
- Press and release the |◀◀ button to go back one track at a time.
- Holding down the |◀◀ or ▶▶| button allows you to change tracks continuously.



❑ Holding down the MANUAL SEARCH ◀◀ or ▶▶ buttons, during playback, will fast forward/backwards the CD so you can quickly find a particular passage in the selection you are listening to. (The fast forward/backwards function cannot be used from the Remote Control.)

Locating a Track With the Remote Control Directly

Using the numeric keys on the Remote Control allows you to go directly to the beginning of any track.

1. **Press the DISC button (1-3) for the disc tray containing the track you want to listen to.**

❑ Example: for the third disc, press 3.

2. **Press the CD 10KEY button.**

3. **Enter the number of the track you want to listen to with the numeric keys.**

The selected track starts playing.

❑ Example: for track 5, press 5. For track 15, press +10 then 5. For track 20, press +10, then 10. For track 32, press +10 three times, then 2.

Programming the Playing Order of the Tracks

You can change the order in which the discs and tracks play, and select only the discs and tracks you want from among those loaded in the CD Player.
By using the Remote Control, you can easily program tracks.

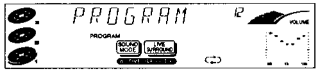
❑ You can program up to 32 steps in any desired order from among the discs in the player.

❑ You can only make or change a program when the CD Player is stopped.

Using the Remote Control

1. **Press the PLAY MODE button.**

The message "PROGRAM" appears in the display and the PROGRAM indicator comes on.
If a program is already running, the track number blinks.

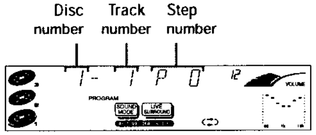


❑ The display changes with each press of the PLAY MODE button, as shown below.
→ PROGRAM → RANDOM → Off (Continuous Play) → (back to the beginning)

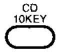
DISC
DISC
DISC

2. **Select a disc with the DISC buttons (1-3).**

The display changes to the Program Entry display and the disc number and track number sections blink for a few seconds. The DISC buttons (1-3), SET button and |◀◀ or ▶▶| buttons on the CA-D5T also blink.



❑ While the display is blinking, perform the operations in steps 3 to 4. When the blinking display changes to the "PROGRAM" display, repeat the operations in steps 2 to 4.

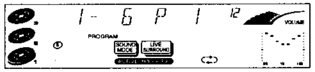


3. **Press the CD 10KEY button.**

4. **Press the numeric keys (1 to 10 and +10) to select the track to program.**

❑ Example: for track 5, press 5. For track 15, press +10 then 5. For track 20, press +10, then 10. For track 32, press +10 three times, then 2.

The blinking disc number and track number changes to the step number display. Also, the blinking buttons on the CA-D5T stop blinking, but remain lit.



5. **Repeat steps 2 to 4 to select the other tracks for the program.**

6. **Press the ▶ button.**

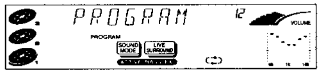
The Unit plays the tracks in the order you have programmed them.

Using the Unit

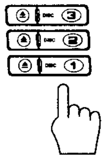
PROGRAM/RANDOM

1. **Press the PROGRAM/RANDOM button.**

The message "PROGRAM" appears in the display and the PROGRAM indicator comes on.
If a program is already running, the track number blinks.

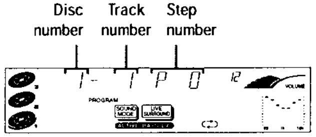


❑ The display changes with each press of the PROGRAM/RANDOM button, as shown below.
→ PROGRAM → RANDOM → Off (Continuous Play) → (back to the beginning)

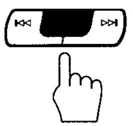


2. **Select a disc with the DISC buttons (1 to 3).**

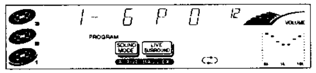
The display changes to the Program Entry display and the disc number and track number sections blink for a few seconds. The DISC buttons (1-3), SET button and |◀◀ or ▶▶| buttons on the CA-D5T also blink.

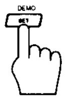


❑ While the display is blinking, perform the operations in steps 3 to 4. When the blinking display changes to the "PROGRAM" display, repeat the operations in steps 2 to 4.

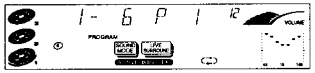


3. **Press the ⏮ or ⏭ buttons to select the track to program.**
   The track number appears in the display.

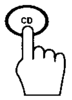




4. **Press the SET button.**
   The blinking disc number and track number changes to the step number display. Also, the blinking buttons on the CA-D5T stop blinking, but remain lit.



5. **Repeat steps 2 to 4 to select the other tracks for the program.**



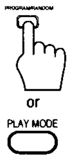
6. **Press the CD button.**
   The Unit plays the tracks in the order you have programmed them.

- ☐ If you try to program a 33rd track, the CA-D5T lets you know that the program is full by displaying the message "FULL" on the display.
- ☐ If you try to program an disc tray that is empty, or a track number that does not exist on a disk (for example, selecting track 14 on a disc that only has 12 tracks), the selected disc or track are skipped when the program is played.
- ☐ You can skip to a particular program step by pressing the ⏮ or ⏭ button during program play.
- ☐ To play the programmed tracks over and over, press the REPEAT button . "REPEAT" lights up on the display.

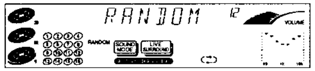
To stop playing, press the STOP/CANCEL ■ button (or the ■ button on the Remote Control) once.
To modify the program, press the STOP/CANCEL ■ button on the CA-D4T while the CD Player is stopped. With each press of the button, a track is deleted from the program until the last track is deleted.
To add tracks to the program, use the procedure above (on either the CA-D5T or the Remote Control) to add the new tracks to the program. The new tracks are added to the end of the program.
To delete all the tracks in a program, keep pressing the STOP/CANCEL ■ button on the Unit until all the tracks in the program have been deleted, or press the ⏏ button for each disc in the program.
To exit Program Mode, press the PROGRAM/RANDOM button (or the PLAY MODE button on the Remote Control) twice to change to Continuous Play mode.

Random Play

The tracks will play in no special order when you use this mode.



1. **Press the PROGRAM/RANDOM button (or the PLAY MODE button on the Remote Control) while the CD Player is stopped to change to the RANDOM Mode display.**



   - ☐ The display changes with each press of the PROGRAM/RANDOM button, as show below.
     PROGRAM → RANDOM → Off (Continuous Play) → (back to the beginning)

2. **Press the CD button (or the ► button on the Remote Control)**
   The tracks are played in random order.
   When all of the tracks have been played, the CD Player stops.

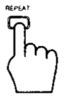
Note: Press the DISC buttons (1-3), or the Numeric keys, to cancel Random play and begin playback in Continuous Play mode.

- ☐ Press the REPEAT button before or during random play to instruct the CA-D5T to continue with a different random track selection after the last selection is played.

To cancel random play, press the PROGRAM/RANDOM button (or the PLAY MODE button on the Remote Control) and select another mode.

Repeating a Selection Or the Discs

You can have all the discs, the program or the individual selection currently playing repeat as many times as you like.



Press the REPEAT button on the CA-D5T.
The display changes with each press of the button, as shown below.
→ REPEAT ALL → REPEAT 1 CD → REPEAT 1 → Off (Continuous Play) → (back to the beginning)

REPEAT ALL: Repeats all the tracks on the CD's in the CD Player, or all the tracks in the program.
REPEAT 1 CD: Repeats all the tracks on one CD.
REPEAT 1: Repeats one track on a CD.

- ☐ The three Repeat Modes above can be selected during Continuous Play, however, during Program Play and Random Play, you can only select REPEAT ALL or REPEAT 1.

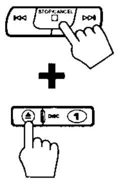
To exit Repeat Mode, press the REPEAT button until the "REPEAT" indicator on the display goes out.

Tray Lock Function

In order to safely keep the discs in the CD Player, the three trays can be electronically locked in a single operation.
When the electronic lock is on, the trays cannot be opened even if the ⏏ button is pressed.

Locking the Electronic Lock

1. **Put the CA-D5T's power into the STANDBY condition.**
   If the power is on, press the POWER button to light the Standby indicator.



2. **While pressing the STOP/CANCEL ■ button, press the ⏏ button for DISC 1's tray on the Unit.**
   "LOCKED" appears in the display to notify that the trays have been locked.

   LOCKED

   When the CD Player trays are locked, pressing the ⏏ buttons displays the message "LOCKED" on the display and the trays do not open. Also, the ⏏ button cannot be used to automatically turn on the power.

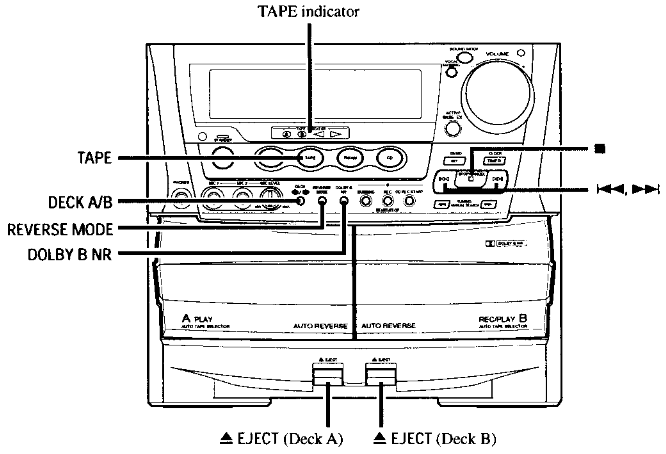
Unlocking the Electronic Lock

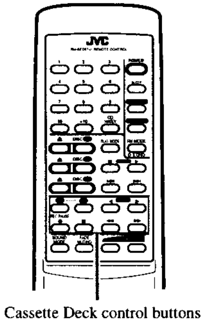
1. **Put the CA-D5T's power into the STANDBY condition.**
   If the power is on, press the POWER button to light the Standby indicator.
2. **While pressing the STOP/CANCEL ■ button, press the ⏏ button for DISC 1's tray on the Unit.**
   When the unlock operation is done, "UNLOCKED" appears in the display to show that the lock has been taken off.

   UNLOCKED

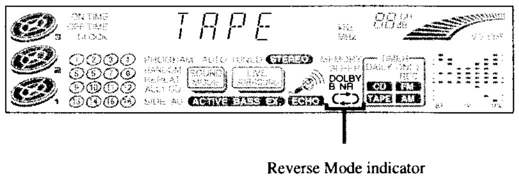
   The trays can now be opened by pressing the ⏏ buttons.
   The ⏏ button can also be used to automatically turn on the power.

Using the Cassette Deck (Listening to a Tape)





Display



When the CA-D5T is being used, the display shows other items as well. However, we have only shown the items described in this section.

The Cassette Deck allows you to play, record and dub audio tapes.

- ☐ Most tapes are now recorded with the Dolby NR system, so first check which type of the Dolby NR system has been used on the tape. Only Dolby B NR is incorporated into the CA-D5T.
- ☐ With Automatic Tape Detection, you can listen to type I or II tapes without changing any settings.

> The use of tapes longer than 120 minutes is not recommended, since characteristic deterioration may occur and these tapes easily jams in the pinch-rollers and the capstans.

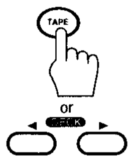
One Touch Play

- ☐ Press the TAPE button.
  The power comes on and "TAPE" lights up on the display . When a tape is already in the tape deck, the tape is played in the direction of the blinking Tape Direction indicator. If no tape is loaded, the CA-D5T automatically turns on and wait for you to insert a tape, or select another function.
- ☐ Press the ◀ or ▶ button on the Remote Control.
  The power comes on and "TAPE" appears in the display. When a tape is already in the tape deck, the tape is played in the direction of the button pressed. If no tape is loaded, the CA-D5T automatically turns on and wait for you to insert a tape, or select another function.

Regular Play

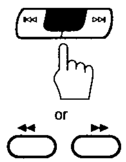
When the power is already on, you can use this basic procedure:

1. **Press the ≜ EJECT button for the deck you want to use.**
2. **When the cassette holder opens, put the cassette in, with the exposed part of the tape down, toward the base of the CA-D5T.**
   - ☐ If the cassette holder does not open, turn the Unit off, then back on and press the ≜ EJECT button again.
3. **Close the holder gently.**
   When both Deck A and Deck B contain a tape, the last deck to have a tape inserted is selected.
   To change the selected deck, press the DECK A/B button.
   When using the Remote Control, press the A or B button.
4. **Press the TAPE button.**
   The tape is played in the direction of the indicator for the selected deck.
   To change the play direction for the tape, press the TAPE button again.
   When using the Remote Control, press the ◀ or ▶ button. The tape is played in the direction of the button pressed.
   - ☐ The Cassette Deck automatically stops when one side of a tape has finished playing.



To stop playing, press the ■ button.
To remove the tape, stop the tape, and press the ≜ EJECT button.
To change deck while playing a tape, press the TAPE button after pressing the DECK A/B button.

When a tape is being played, pressing the TAPE button only changes the direction of playback.



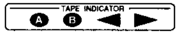
Fast Left And Fast Right

- ☐ While the tape is stopped, press the |◀◀ button (or the ◀◀ button on the Remote Control) and the tape will wind rapidly onto the left side of the cassette without playing.
- ☐ While the tape is stopped, press the ▶▶| button (or the ▶▶ button on the Remote Control) and the tape will wind rapidly onto the right side of the cassette without playing.

The MANUAL SEARCH ◀◀ or ▶▶ buttons on the Unit can also be used for this operation.

Note: Deck A and Deck B cannot be used for playback at the same time.

TAPE Indicator



The TAPE indicator tells you which direction the selected tape deck will use for playback.
During playback, the direction indicator blinks slowly. During fast forward or fast reverse, the indicator blinks quickly.
During Music Scan mode, the direction indicator alternates between blinking slowly and quickly repeatedly.

Music Scan

To find the beginning of a music track during play, use the Music Scan function. Music Scan searches for blank portions that usually separate tracks, then plays the next song.

To Find the Beginning of the Current Song

Press the ⏮ or ⏭ button (or the ◀◀ or ▶▶ button on the Remote Control) during play.

- Make sure that you press the ⏮ or ⏭ button (or the ◀◀ or ▶▶ button on the Remote Control) in the opposite direction to that in which the tape is playing. Searching stops at the beginning of the current song, and the current song starts automatically.

To Find the Beginning of the Next Song

Press the ⏮ or ⏭ button (or the ◀◀ or ▶▶ button on the Remote Control) during play.

- Make sure that you press the ⏮ or ⏭ button (or the ◀◀ or ▶▶ button on the Remote Control) in the same direction as that in which the tape is playing. Searching stops at the beginning of the next song, and the next song starts automatically.

Music Scan works by detecting a 4-second long blank at the beginning of each selection, so it won't work well if your tape has:

- No blank at the beginning of a track
- Noise (often caused by much use or poor quality dubbing) which fills the blank with noise.
- Long, very soft passages or pauses in a selection. The scan will detect these as 4-second long blanks. If this happens, just scan again until you reach the selection you want.

Other Useful Features of the Cassette Deck

REVERSE MODE

- Use **Reverse Mode** to make the tape automatically reverse at the end of a side and start playing the other side. Press the REVERSE MODE button to change from Reverse Mode on to Reverse Mode off, or from off to on.

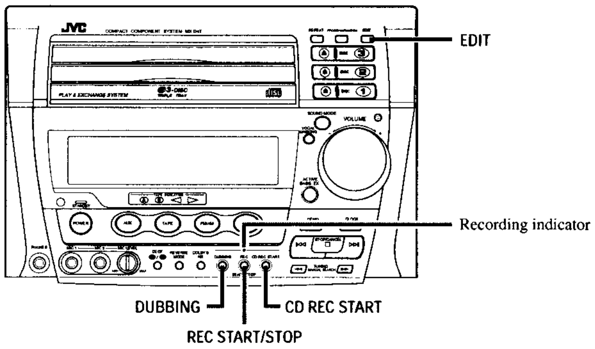
Reverse Mode ON　　Reverse Mode OFF

- **Continuous Play:** With the Reverse Mode indicator on, when tape playback in the ◀ direction finishes, the Unit always checks to see if a tape is in the other deck. If there is, it automatically starts playing. This Continuous Play function works regardless of which deck starts first.

- Press the DOLBY B NR button to switch Dolby B Noise Reduction on (the indicator lights up) or off (the indicator goes off). If a tape is recorded with the Dolby B NR system, playing it back with the Dolby NR on will reduce tape noise and improve the clarity of the sound.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
"DOLBY" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

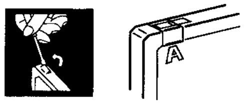
Using the Cassette Deck (Recording)



Recording onto a cassette from any of the sound sources is simple. Just place a tape in Deck B, have the source ready, make one or two settings, and you're ready to record. For each source the procedure is a little different and now we'll explain just what to do for each one. If you forget, just come back to the section which has the specific procedures you need. But first, here are a few things to make your recordings better.

Things To Know Before You Start Recording

- **It may be unlawful to record or play back copyrighted material without the consent of the copyright owner.**
- Press the DOLBY B NR button — the indicator lights up — to reduce tape hiss, except when dubbing tapes, since Dolby NR is inactive in Dubbing Mode regardless of the setting of DOLBY B NR. The dubbed tape automatically contains the same processing as the source tape.
- The recording level, which is the volume at which the new tape is being made, is automatically set correctly, so it is not affected by the VOLUME control on the CA-D5T. Thus, during recording you can adjust the sound you are actually listening to without affecting the recording level.
- Two small tabs on the back of the cassette tape, one for side A and one for side B, can be removed to prevent accidental erasure or re-recording.
  To record on a cassette with the tabs removed, you must cover the holes with adhesive tape first. However, when a type II tape is used, only cover part of the hole as shown, since the other part of the hole is used to detect the tape type.



- When recording, you can hear Sound Effect effects through the speakers or headphones. However, the sound is recorded without Sound Mode effects.
- Type I and Type II tapes can be used for recording.

Note: At the start and end of cassette tapes, there is leader tape which cannot be recorded onto. Depending on the recording source, the first part of the recording may be missing because of the leader. When recording CDs or radio broadcasts, to get the beginning of the recording on the tape, first wind on the leader before beginning recording.

CAUTION: If recordings you have made have excessive noise or static, the Unit may be too close to a TV which was on during the recording. Either turn off the TV or increase the distance between the TV and the CA-D5T.

Standard Recording

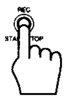
This is the basic method for recording any source. The CA-D5T also has special ways for recording CD to tape, and tape to tape, which save you time and effort, as well as give you some special effects.
However, when you need to add a selection to a tape you have made, or are combining selections from several sources on one tape, use the method described below; just substitute the source you want into this procedure, such as a tape in Deck A, a CD, or the Tuner. You can also record from an auxiliary source with this procedure.

To Record Any Sound Source To Tape

Follow these steps to record from any sound source onto a tape in Deck B.

Using the Unit

1. **Insert a blank or erasable tape into Deck B.**
2. **Press the REVERSE MODE button if you want to record on both sides of the tape.**
   Reverse Mode comes on.
   ❑ When using Reverse Mode, insert the tape so that it will be recorded in the forwards ► direction.
3. **Check the recording direction for the tape.**
   Check that the direction indicator is the same as that for the tape in the tape deck. If the directions are different, press the TAPE button twice then press the STOP ■ button.
   ❑ When using Reverse Mode to record both sides of a tape, check that the direction indicator is in the forwards ► direction. If the direction indicator is not in the forwards ► direction, press the TAPE button twice then press the STOP ■ button.
4. **Prepare the source, by, for example, tuning in a radio station, loading CDs, or turning on connected equipment.**



5. **Press the REC START/STOP button.**
   The Recording indicator light comes on and the CA-D5T begins recording.

Using the Remote Control

1. **Insert a blank or erasable tape into Deck B.**
2. **Press the REC PAUSE button.**
   The Recording indicator light comes on.
3. **Press the REVERSE MODE button if you want to record on both sides of the tape.**
   Reverse Mode comes on.
   ❑ When using Reverse Mode, insert the tape so that it will be recorded in the forwards ► direction.
4. **Prepare the source by, for example, tuning in a radio station, loading CDs, or turning on connected equipment.**

5. **Press the ◄ or ► button.**
   Recording starts in the direction of the button pressed.
   ❑ When using Reverse Mode to record both sides of a tape, press the ► button.

Notes for using Reverse Mode for recording

When recording in Reverse Mode, the CA-D5T automatically stops when it reaches the end of the reverse ◄ direction. To record on both sides of a tape, make sure that the recording direction for the tape inserted into Deck B is forwards ►, and that the direction indicator for the TAPE indicator is also forwards ►, before you start recording.

To Pause At Any Time During the Recording Process
Press the REC PAUSE button on the Remote Control. Then press either the ◄ or ► button on the Remote Control or REC START/STOP button on the Unit to restart recording.
To Stop At Any Time During the Recording Process
Press the REC button on the CA-D5T again, or press the ■ button on the Remote Control.

CD Direct Recording

Everything on the CD goes onto the tape in the order it is on the CD, or according to an order you have set in a program.

1. **Prepare CDs. (See page 15.)**
   Check that the CD Player is stopped.
2. **Insert a cassette in Deck B to record on.**
   ❑ When you want to record on both sides of a tape, press the REVERSE MODE to turn Reverse Mode on. Check that the recording direction for the tape and the TAPE indicator are correct. (See "Notes for using Reverse Mode for recording" earlier on this page.)

CD REC START

3. **Press the CD REC START button.**
   The Unit plays the CD and starts recording.

   At the end of the tape, the CA-D5T automatically goes back to the beginning of the last selection and re-records it, this time gently fading out at the end. If you selected the Reverse Mode, the reverse side starts with the last selection on the front side and will be faded out at the end again. (A 10 second blank is created at the beginning of the reverse side.)
   When the recording is finished, the message "CD REC FINISHED" scrolls by on the display. The CD Player and Cassette Deck stop.

To Stop At Any Time During the Recording Process
Press the STOP ■ button.

Note: When making SLEEP timer settings while doing CD Direct recording, set the time so that there is enough leeway to finish the recording before the power goes off. If the time is set to about the length of the CD, the power may go off before recording finishes.

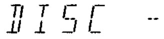
For CD Direct Recording using more than one disc, use a blank tape, If you use a pre-recorded tape, pre-recorded sound may not be erased between newly-recorded tracks.

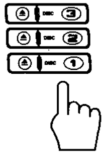
Auto Edit Recording

Using Auto Edit, you can record the CD tracks to fit the tape, so a selection isn't cut off. Auto Edit is one of the best ways to copy all of a CD onto a tape.
Auto Edit programs the CD tracks in numerical order. To prevent the end of the last track on the front side from being cut off, the last track on the front side is selected to fit on the remaining tape length.

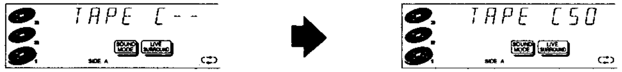
1. **Prepare CDs. (See page 15.)**

2. **Press the EDIT button on the Unit.**
The DISC button (1-3) light comes on and "DISC-" appears in the display.





3. **Press the DISC button for the disc you want to record.**
The DISC button (1-3) changes from a blinking light to a continuously lit display, and the recommended tape length for the recording appears in the display.



- ☐ You can select a different length of tape, depending on the actual size of the tape you are using, from eleven possibilities programmed into the CA-D5T: 40, 46, 50, 54, 60, 64, 70, 74, 80, 84, 90. Cycle through these choice using the ⏮ or ⏭ button until you find the length closest to your tape's actual length.
  - If you pick a tape length shorter than the total playing time of the CD, the last tracks on both sides of the tape will be faded out as the tape ends.

4. **Press the SET button.**
The tracks to be recorded on side B of the tape appear on the display.

- ☐ To display the tracks that will be recorded on side A of the tape, press the SET button again. The Unit switches between Side A and Side B with each press of the SET button.
- ☐ To check the tracks that will be recorded, press the ⏮or ⏭ buttons on the Remote Control.

5. **Insert a cassette in Deck B to record on.**
When you want to record on both sides of a tape, press the REVERSE MODE to turn Reverse Mode on.

CD REC START

6. **Press the CD REC START button.**
The recording indicator light comes on and the CD buttons starts to blink. The message "TAPE SIDE A STANDBY" scrolls by on the display and the CA-D5T prepares to start recording. If the tape has not been rewound, it is rewound to the start.
When the tape is ready, to prevent the start of a track being cut, the CA-D5T creates a blank period of 10 seconds before it starts to record the CD. (The CA-D5T also creates a 10 second blank period at the start of side B of the tape.) When recording starts, the CD button changes from a blinking light to a continuously lit display.

When the recording is finished, the message "CD REC FINISHED" scrolls by on the display. The CD Player and Cassette Deck stop.

To stop at any time while recording, press the STOP ■ button. The CD Player stops, and then the Cassette Deck stops about four seconds later.

To cancel Auto Edit, press the ⏏ button for disc number being recorded, or press the PROGRAM/RANDOM button while the CD Player is stopped.

Note: When making SLEEP timer settings while doing Auto Edit recording, set the time so that there is enough leeway to finish the recording before the power goes off. If the time is set to about the length of the CD, the power may go off before recording finishes.

Tape To Tape Recording (Dubbing)

Recording from one tape to another is called dubbing.
You can dub tapes simply, with just a single button.

- ☐ When dubbing tapes, make sure that the playback direction of Deck A and Deck B are the same.
- ☐ When you want to record both sides of a tape, press the REVERSE MODE to turn Reverse Mode on. Make sure that the play direction for the tapes in both Deck A and Deck B are in the forwards ▶ direction, and that the TAPE indicator is also in the forwards ▶ direction before you start recording.
- ☐ It is preferable that the type of tape (Type I or Type II) you record from be the same as the type you record onto.

How To Use the DUBBING Button

1. **Insert the source cassette you want to copy from into Deck A for playback.**

2. **Insert the blank or erasable cassette you want to copy onto in to Deck B for recording.**

3. **Press the DUBBING button.**
Deck A and Deck B will start simultaneously.
☐ If the tape has not been rewound, it is rewound before dubbing starts.

To stop dubbing, press the STOP ■ button (or ■ button on the Remote Control).

- ☐ Dolby NR is inactive in dubbing mode regardless of the setting of DOLBY B NR. The dubbed tape automatically contains the same processing as the source tape.
- ☐ When doing dubbing with the DUBBING button, you can hear Sound Mode effects through the speakers or headphones. However, the sound is dubbed without Sound Mode effects.

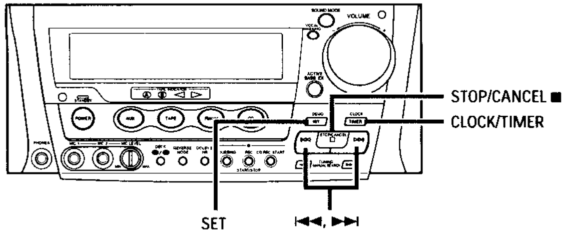
Recording With the Timer

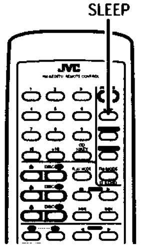
The Cassette Deck can be set to record a tape automatically. This is especially useful for recording broadcasts when you are not at home, or late at night when you are asleep.

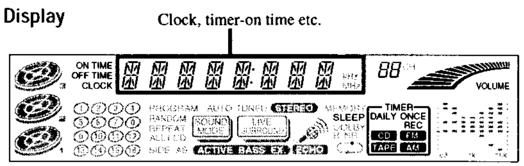
1. **Insert a cassette for recording into Deck B.**

2. **Set the ONCE REC Timer, by following the steps in "Setting the ONCE REC (Recording) Timer" (Page 32).**

Using the Timers







When the CA-D5T is being used, the display shows other items as well. However, we have only shown the items described in this section.

The timers lets you control recording and listening functions automatically.
Three types of timers are available:

- ❑ **DAILY Timer** — Wake up to music from any source.
- ❑ **ONCE REC (Recording) Timer** — Unattended recording of radio broadcasts. You can set the starting time and length of the recording.
- ❑ **SLEEP Timer** — Fall asleep and have your CA-D5T turn off automatically after a certain length of time.

Clock Setting

The timers depend on the clock: the clock must be right for the timers to work as you expect.
Note that the clock must be set, or the timers cannot be set.

Setting the Clock

1. **Press the CLOCK/TIMER button.**
   The SET button light comes on.
2. **Set the hour by pressing the ⏮ or ⏭ button.**
   Pressing the ⏭ button increase the hour, and pressing ⏮ button decrease it.
   Holding down these buttons allows you to continuously adjust the hour setting until the button is released.
3. **Press the SET button.**
   Check that the hour setting is correct.
4. **Set the minutes by pressing the ⏮ or ⏭ button.**
   Pressing the ⏭ button increase the minute, and pressing ⏮ button decrease it.
   Holding down these buttons allows you to continuously adjust the minute setting in 10 minute increments until the button is released.
5. **Press the SET button.**
   The SET button light goes out and the clock is set to the hour and minute you have selected starting from zero seconds after "CLOCK OK" appears in the display.

CAUITON: If there is a power failure, the clock loses its setting. The display shows "0:00", and the clock must be reset.

Setting the DAILY Timer

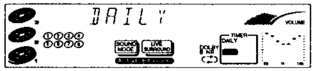
With this timer you can wake up to music from a CD, tape or your favourite radio program.
❑ You can set the DAILY Timer whether the Unit is on or off.

Procedure For Setting the DAILY Timer

The DAILY Timer is used to set the various settings, from the Timer ON setting to the Volume level.
Use the ⏮ or ⏭ buttons to select each setting then press the SET button to complete the setting.
To correct any errors in the setting, press the STOP/CANCEL ■ button, and go back through the settings until you reach the Timer ON setting.
The ⏮, ⏭, SET and STOP/CANCEL ■buttons blink if they can be used in a particular setting.
When the SET button is pressed, the settings for the next item are displayed on the display.

CLOCK
TIMER

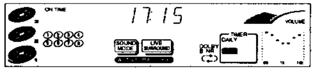
1. **Press the TIMER button and so that "DAILY Timer" appears in the display.**
   The message "DAILY" blinks on the display and the DAILY indicator light blinks.

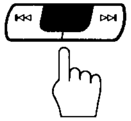


   ❑ The display changes with each press of the button, as shown below.
   DAILY (blinks) → ON TIME (blinks) → ONCE REC (blinks) → ON TIME (blinks) → CLOCK (blinks) (Clock setting mode) → original display before the TIMER button was pressed → to the beginning)

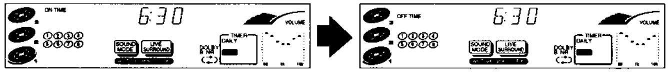
CLOCK
TIMER

2. **Press the TIMER button again.**
   The display changes to the blinking "DAILY" or a blinking display of the Timer ON setting.



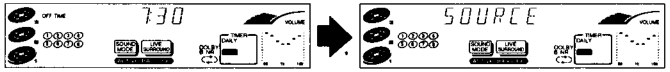


3. **Set the time you want the Unit to turn on.**

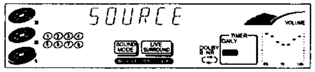


The "OFF TIME" hour setting starts to blink after the "ON TIME" minute setting is set.

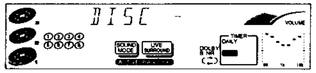
4. **Set the time you want the Unit to turn off.**



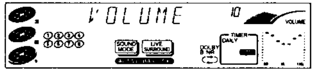
5. **Select the source you want to listen to.**



When CD is selected.

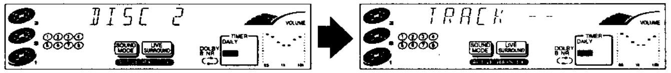


When TAPE, FM or AM are selected.



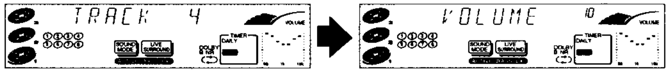
CD: Select this when you want to listen to a CD. When CD is selected, you can set the disc number and track number (1-20).
Use the procedure below to set the disc number and track number.

1. Set the disc number.



- If a disc number is not set, the disc indicated by the disc marker is selected.

2. Set the track number.

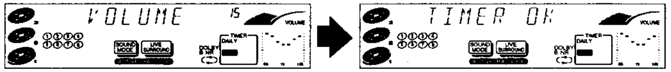


- If no track number is set, playback starts from the first track.

TAPE: Select this when you want to listen to a cassette tape.
FM: Select this when you want to listen to a FM channel.
AM: Select this when you want to listen to an AM channel.

- If you select FM or AM as the source, the last played station is the one which comes on at the set time.

5. Setting the Volume Level.
When the volume level is set, the message "TIMER OK" is displayed, and the blinking "DAILY" indicator changes to a continuously lit display to let you know that the DAILY Timer setting is complete.



STANDBY
POWER

6. Turn the power off.
When the timer start time arrives, the CA-D5T's power is turned on and the source you selected is played. When the timer end time comes, the power is turned off again.

☐ If you press any source button while the DAILY Timer is active, the timer operation is cancelled.

Before Turning Off the Unit

☐ If the source is a CD, make sure that there is a CD in the selected disc number.
☐ If the source is a tape:
  - Check that the tape direction is correct. This is important especially when Reverse Mode is off.
  - Deck B has priority, so if tapes are in both decks, the tape in Deck B plays first.
  - Set Reverse Mode on if you want to play both sides of the tape.
☐ Select the Sound Mode if you want to listen using a Sound Mode (D. CLUB, HALL STADIUM, etc.).

To change the DAILY Timer setting
To change the settings for the DAILY Timer, repeat the setting procedure from the beginning.

Turning the DAILY Timer On and Off

Once the DAILY Timer has been set it will be activated at the same time every day until the setting is turned off.
To turn the DAILY Timer off, press the TIMER button until "DAILY" appears in the display, then press the STOP/CANCEL ■ button.
The message "OFF" appears in the display.

To turn the DAILY TIMER on again, press the TIMER button until "DAILY" appears in the display, then press the SET button.
The Timer ON TIME, OFF TIME, PLAYBACK SOURCE (including the disc number and track number if a CD source is selected) are displayed on the display.

CAUTION: If the CA-D5T is unplugged, or a power failure occurs, the timer setting will be erased after 2 or 3 days. If the settings are erased in this way, reset the timer settings.

Setting the ONCE REC (Recording) Timer

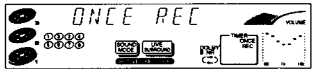
With the Recording Timer you can make a tape of a radio broadcast automatically whether or not you are home. For the timer to work correctly, you need to make sure of the following in addition to setting the time for the Tuner and Cassette Deck to come on:

☐ You can set the Recording Timer whether the Unit is on or off.
☐ The tape you want to record onto must be in Deck B.
☐ The radio station whose program you want to tape must be the last one played before the timer comes on.

Procedure for Setting the Recording Time

CLOCK
TIMER

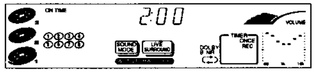
1. Press the TIMER button until "ONCE REC" appears in the display.
The message "ONCE REC" blinks on the display and the ONCE REC indicator light blinks.



☐ The display changes with each press of the button, as shown below.
DAILY (blinks) → ON TIME (blinks) → ONCE REC (blinks) → ON TIME (blinks) → CLOCK (blinks) (Clock setting mode) → original display before the TIMER button was pressed → to the beginning)

CLOCK
TIMER

2. Press the TIMER button again.
The display changes from "ONCE REC" to the setting display for the Timer ON time.



3. Set the time you want the radio to come on, and put a tape in Deck B to record on.
☐ Use the ⏮ or ⏭ button to set the start time, then press the SET button.

4. Set the time you want the radio to shut off and the tape in Deck B to stop recording.
☐ Use the ⏮ or ⏭ button to set the off time, then press the SET button.
The message "TIMER OK" is displayed, and the blinking "ONCE REC" indicator changes to a continuously lit display to let you know that the ONCE REC Timer setting is complete.

STANDBY
POWER

5. Turn the power off.
When the set time comes, the CA-D5T turns the power on and records the broadcasting station you selected last, before turning the power off.
☐ If a button is pressed when the Recording timer is operating, recording continues but the timer is cancelled.

Before the Timer Starts

☐ Check that the recording direction for the tape and the TAPE indicator are the same.
☐ Set Reverse Mode to on if you want to record on both sides of the tape. Check that the recording direction and the direction of the TAPE indicator are correct. (See "Notes for using Reverse Mode for recording" on page 26.)
☐ The VOLUME control is automatically set to 0 when ONCE REC Timer is recording.

It is very easy, and can be very disappointing, to forget to put in a tape, or to accidentally leave a tape in Deck B you don't want recorded over. Although this happens to almost everyone at one time or another, we hope it won't happen to you!

To Change the Recording Timer Setting
To change the settings for the ONCE REC Timer, repeat the setting procedure from the beginning.

Turning the ONCE REC Timer On and Off

Once the ONCE REC Timer has been used to record a source, the setting is maintained but the Timer is set to OFF.
To record at the same time again, press the TIMER button, select the "ONCE REC" display and press the SET button to turn the ONCE REC Timer on.
The ON TIME and OFF TIME are displayed.

To turn the ONCE REC Timer off before the timer starts, press the TIMER button, select the "ONCE REC" display and press the STOP/CANCEL ■ button to turn the timer off.
The message "OFF" appears in the display.

CAUTION: If the CA-D5T is unplugged, or a power failure occurs, the timer setting will be erased after 2 or 3 days. If settings are erased in this way, reset the timer settings.

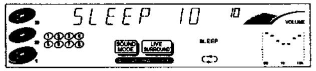
Setting the SLEEP Timer

Use the Sleep Timer to turn the Unit off after a certain number of minutes when it is playing. By setting this timer, you can fall asleep to music and know your Unit will turn off by itself rather than play all night.

- ❑ You can only set the Sleep Timer when the Unit is on and a source is playing.

To set the SLEEP Timer, follow this procedure:

1. With the CA-D5T on and a source playing, press the SLEEP button on the Remote Control.
   The message "SLEEP" appears in the display.



2. Set the length of time you want the source to play before shutting off.
   - ❑ Each time you press this button while the "SLEEP" indicator is blinking, it changes the number of minutes shown on the display in this sequence:

   → 10 → 20 → 30 → 60 → 90 → 120 → Cancelled → (back to the beginning)

When the number of minutes you want shows on the display, just wait 5 seconds until the indicator stops blinking, and is lighted steadily.

The Unit is now set to turn off after the number of minutes you set.

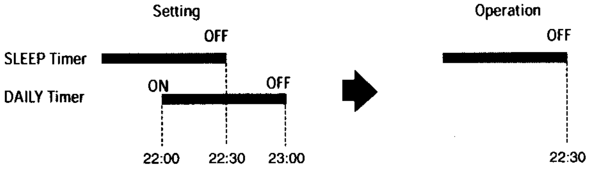
To Change the SLEEP Timer Setting
Press the SLEEP button until the number of minutes you want appears on the display.
To Cancel the SLEEP Timer Setting
Press the SLEEP button until the "SLEEP" indicator goes off on the display.
Turning off the Unit also cancels the SLEEP Timer.

Timer Priority

Since each timer can be set independently, you may wonder what happens if the settings overlap. Here are the priorities for each timer:

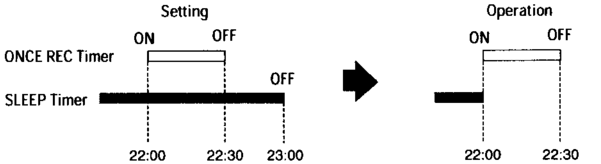
- ❑ The ONCE REC Timer always has priority. This means that:
  - If another timer is set to come on during a time when the ONCE REC Timer is operating, the other timer just won't come on at all, so you will always get the entire program on tape.
  - If the ONCE REC Timer is set to come on while another timer is operating, the other timer will shut off 10 seconds before the ONCE REC Timer is set to turn on, and the ONCE REC Timer will then take over.
- ❑ The SLEEP Timer has priority over the DAILY Timer. This is important because if you set the SLEEP Timer to start before and then end after the DAILY Timer would start, the DAILY Timer doesn't come on. So if you want your alarm to go off as scheduled, be sure the SLEEP Timer shuts off before the DAILY Timer is set to turn on the Unit.

Example 1



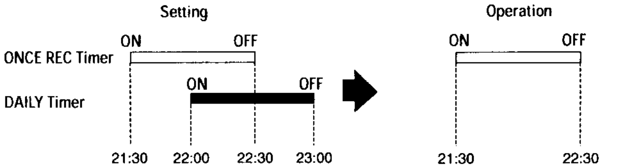
The SLEEP Timer has priority.

Example 2



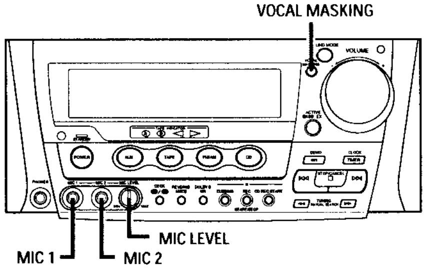
The ONCE REC Timer has priority.

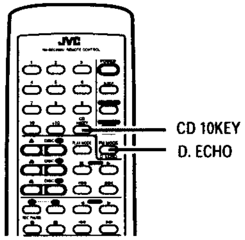
Example 3



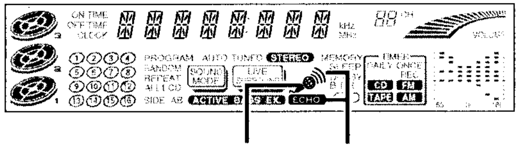
The ONCE REC Timer has priority.

Using the Microphone





Display



When the CA-D5T is being used, the display shows other items as well. However, we have only shown the items described in this section.

The CA-D5T includes two microphone terminals, MIC 1 and MIC 2. By attaching a microphone to one or both of these terminals, you can use the CA-D5T for Karaoke or microphone mixing. You can also add an echo to the microphone's sound.

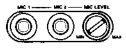
- ❑ The MIC LEVEL control adjust the volume for both MIC 1 and MIC 2 at the same time.
- ❑ When you will not be using the microphone, keep the MIC LEVEL control set to MIN, and disconnect the microphone.

CAUTION: Always set the MIC LEVEL control to MIN when attaching or disconnecting the microphone.

Karaoke (Sing Along)

The Vocal Masking function lets you use regular tapes, CDs or records as sources for Karaoke. When you press the VOCAL MASKING button, the lead vocal volume of the source is reduced, and you can replace it by singing into the microphones as the music plays.

Singing Along with Karaoke



VOCAL MASKING

1. Turn the MIC LEVEL control to MIN.
2. Attach the microphone (not supplied) by plugging it into the MIC jack on the front panel.
3. Start the source CD, tape or connected equipment.
4. Press the VOCAL MASKING button.
   "V, MASK" appears in the display, and the "🎤" indicator lamp comes on.

   V. MASK
5. Adjust the VOLUME control and the MIC LEVEL control, as you sing into the microphone.

Important Information on Karaoke

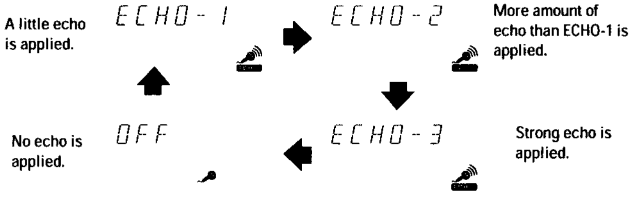
- ❑ Because a radio signal is not as reliable as signals coming from a tape or CD, you may not always get satisfactory results using the radio as a source for Karaoke.
- ❑ Some tapes and CDs are better sources for Karaoke than others.
  - Mono sources are not suitable for Karaoke.
  - The lead vocals may not be completely reduced for sources with duets, strong echo, a chorus, or only a few instruments.
  - Poorly dubbed tapes may not be suitable for Karaoke.

Digital Echo

CD 10KEY
FM MODE
D. ECHO

You can select 3 levels of echo effect to apply to your voice.

1. Press the CD 10KEY button on the Remote Control.
2. Press the D. ECHO button on the Remote Control.
   The display changes with echo press of the button , as follows:


A little echo is applied.
ECHO-1
ECHO-2
More amount of echo than ECHO-1 is applied.
No echo is applied.
OFF
ECHO-3
Strong echo is applied.

To prevent howling and squealing (feedback) when using the microphone, adjust the MIC LEVEL control and the VOLUME control. Also, try to avoid pointing the microphone towards the speakers.

- ❑ When two microphones are connected, turn the microphone ON/OFF switch for the microphone that is not being used to OFF.
- ❑ When recording sound from the microphone, the digital echo effect is also recorded.

To Record Your Singing

1. Follow the step in "Singing Along with Karaoke" above.
2. Follow the steps in "Standard Recording" (See page 25) to record your singing.

❑ When recording Karaoke, Deck A cannot be used for the Karaoke source.

Microphone Mixing

When using special Karaoke sources for karaoke, use the following procedure.

MIC 1
MIC 2
MIC LEVEL
MIN
MAX

1. Turn the MIC LEVEL control to MIN.
2. Attach the microphone (not supplied) by plugging it into the MIC jack on the front panel.
3. Start the source CD, tape, or connected equipment.
4. Adjust the VOLUME control and the MIC LEVEL control, as you sing into the microphone.
   To apply echo to the microphone sound, follow the steps in "Digital Echo" (Page 36).

To Record Microphone Mixing

1. Follow the steps in "Microphone Mixing" above.
2. To record, follow the steps in "Standard Recording" (See page 25).

☐ When recording Microphone Mixing, Deck A cannot be used for the microphone mixing source.

Playing the Microphone sound through the Speakers

MIC 1
MIC 2
MIC LEVEL
MIN
MAX

1. Turn the MIC LEVEL control to MIN.
2. Attach the microphone (not supplied) by plugging it into the MIC jack on the front panel.
3. Press the STOP/CANCEL ■ button after pressing the CD button.
4. Adjust the VOLUME control and the MIC LEVEL control as you sing into the microphone.
   To apply echo to the microphone sound, follow the steps in "Digital Echo" (Page 36).

Recording from the microphone

1. Follow the steps in "Playing the Microphone sound through the Speakers" above.
2. To record, follow the steps in "Standard Recording". (See page 25).

Specifications

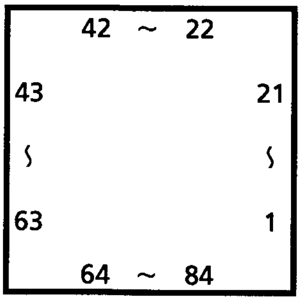
Amplifier Section	
Output Power (IEC 286-3/DIN)	50 watts per channel, min. RMS, both channels driven, into 6 ohms at 1 kHz, with no more than 0.9% total harmonic distortion.
Input Sensitivity/Impedance (1 kHz)	
AUX	300 mV/50 kohms
MIC 1	2 mV/10 kohms
MIC 2	2 mV/10 kohms
Speaker terminals	
Main speakers	6 - 16 ohms
Cassette Deck Section	
Frequency Response	
Type II (CrO_2) :	30 - 16,000 Hz
Type I (NORMAL) :	30 - 15,000 Hz
Wow And Flutter	0.15% (WRMS)
CD Automatic Changer Section	
CD Capacity	3 discs
Dynamic Range	93 dB
Signal-To-Noise Ratio	96 dB
Wow And Flutter	Unmeasurable
Tuner Section	
FM Tuner	
Tuning Range	87.5 - 108.0 MHz
AM Tuner	
Tuning Range	531 - 1,602 kHz (at 9 kHz channel space) 530 - 1,600 kHz (at 10 kHz channel space)
Dimensions	245 x 280 x 347.5 mm (W/H/D) (9-11/16 x 11-1/16 x 13-11/16 inches)
Mass	7.7 kg (17.0 lbs)
Accessories	
	AM Loop Antenna (1) Remote Control (1) Batteries R6P (SUM-3)/AA (15F) (2) FM Wire Antenna (1) AC Plug Adaptor (except for Hong Kong) (1)
Power Specifications	
Power Requirements	AC 110/127/220/230 - 240 V ∿, 50/60 Hz adjustable with the voltage selector
Power Consumption	130 watts 17 watts (in standby mode)
Max. Power Consumption	325 watts (Taiwan only)

Design and specifications are subject to change without notice.

Description of the ICs

- MN172412J6N1(IC701) : System Controller

1. Terminal layout



2. Key matrix

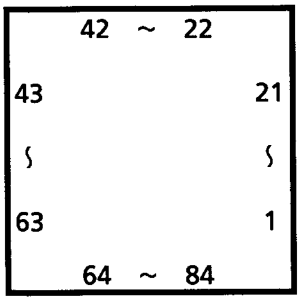
	KEY IN 0 (49pin)	KEY IN 1 (50pin)	KEY IN2 (51pin)		KEY IN 0 (49pin)	KEY IN 1 (50pin)	KEY IN2 (51pin)
1G (3pin)	PROGRAM/ (S701)	EDIT (S702)	REPEAT RANDOM (S703)	6G (8pin)	CD (S716)	REC (S717)	◀◀ (S718)
2G (4pin)	OPEN / CLOSE 1 (S704)	OPEN / CLOSE 2 (S705)	OPEN / CLOSE 3 (S706)	7G (9pin)	FM / AM (S719)	DUBBING (S720)	STOP / CLEAR (S721)
3G (5pin)	DISC 1 (S707)	DISC 2 (S708)	DISC 3 (S709)	8G (10pin)	TAPE (S722)	DOLBY B NR (S723)	▶▶ (S724)
4G (6pin)	KARAOKE (S710)	SOUND MODE (S711)	BASS (S712)	9G (11pin)	AUX (S725)	REVERSE MODE (S726)	▶▶| (S727)
5G (7pin)	DEMO / SET (S713)	CD REC START (S714)	|◀◀ (S715)	10G (12pin)	POWER (S728)	A/B (S729)	CLOCK TIMER (S730)

3. Pin Functions

Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	S11	O	FL Segment control output	45	COMCLK	I	Clock signal input from IC751
2	S12	O	FL Segment control output	46	COMDT1	I	Data signal input from IC751
3	1G	O	FL Grid control output(Key matrix output)	47	COMDT2	O	Data signal output for IC751
4	2G	O	FL Grid control output(Key matrix output)	48	RMIN	I	Remote control signal input
5	3G	O	FL Grid control output(Key matrix output)	49	KI0	I	Key matrix input
6	4G	O	FL Grid control output(Key matrix output)	50	KI1	I	Key matrix input
7	5G	O	FL Grid control output(Key matrix output)	51	KI2	I	Key matrix input
8	6G	O	FL Grid control output(Key matrix output)	52	COMRDY	I	Redy signal input from IC851
9	7G	O	FL Grid control output(Key matrix output)	53	PRT	I	Protector signal input
10	8G	O	FL Grid control output(Key matrix output)	54	JOG IN 1	I	Input 1 of JOG Palse
11	9G	O	FL Grid control output	55	JOG IN 2	I	Input 2 of JOG Palse
12	10G	O	FL Grid control output	56	IFDATA	I	Data signal input from IC121
13	11G	O	FL Grid control output	57	TCLK	O	Clock signal output for IC121
14	12G	O	FL Grid control output	58	TDATA	O	Data signal output for IC121
15	13G	O	FL Grid control output	59	TCE	O	Thip eneble for IC121
16	14G	O	FL Grid control output	60	/INH	I	Inhibit signal input
19	S13	O	FL Segment control output	61	SPK	O	Speaker relay control signal output
20	S14	O	FL Segment control output	62	SCL	O	Clock signal output for IC401
21	S15	O	FL Segment control output	63	SDA	O	Data signal output for IC401
22	S16	O	FL Segment control output	64	CD,IND	O	'CD' indicator control signal
23	V_{PP}	--	Power supply(-Vpp,,,)	65	TUNER,IND	O	'TUNER' indicator control signal
24	S17	O	FL Segment control output	66	TAPE,IND	O	'TAPE' indicator control signal
25	S18	O	FL Segment control output	67	AUX,IND	O	'AUX' indicator control signal
26	S19	O	FL Segment control output	68	RESET	I	System reset signal signal input
30	STOP.IND	O	'STOP' indicator control signal	69	X1	--	Connection of the GND
31	SET,IND	O	'SET' indicator control signal	71	VSS	--	Connection of the GND
32	DISC1,IND	O	'DISC1'indicator control signal	72	OSC2	--	Oscillation terminal (6MHz)
33	DISC2,IND	O	'DISC2' indicator control signal	73	OSC1	--	Oscillation terminal (6MHz)
34	DISC3,IND	O	'DISC3' indicator control signal	74	V_{DD}	--	Power supply(+5V)
35	SKIP,IND	O	'SKIP' indicator control signal	75	S1	O	FL Segment control output
36	SURROUND	O	SURROUND control signal output	76	S2	O	FL Segment control output
37	V,MASK	O	Vocal masking control signal output	77	S3	O	FL Segment control output
38	ECHO1	O	Echo1 control signal output	78	S4	O	FL Segment control output
39	ECHO2	O	Echo2 control signal output	79	S5	O	FL Segment control output
40	T,MUTE	O	Tuner mute signal output	80	S6	O	FL Segment control output
41	S,MUTE	O	Sourse mute signal output	81	S7	O	FL Segment control output
42	POWER	O	Power control signal output	82	S8	O	FL Segment control output
43	H,PH,IN	I	Head phone detect signal input	83	S9	O	FL Segment control output
44	RMOUT	O	Infrared ray LED output for IllumiMagic compu play	84	S10	O	FL Segment control output

■ MN172412K8D1 (IC751) : Deck & CD Controller

1. Terminal layout

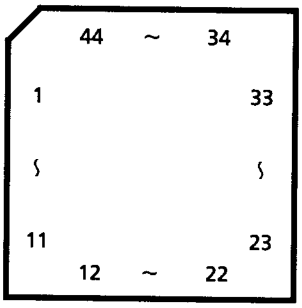


2. Pin Functions

Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	APACK	I	APACKswitch detect input	43	COMDT2	O	Data 2 signal for IC701
2	AEQ	O	Play equalizer control	44	NC	--	Pull down
3	DECKAI	O	Indication control	45	SQCK	O	Clock signal for sub code and Q register
4	DECKBI	O	Indication control	46	SUBQ	I	Sub code and Q register signal input
5	PLAYRI	O	Indication control	47	LSI POWER	O	CD LSI Power output control
6	PLAYFI	O	Indication control	48	STAT	I	Statas signal input
7	RECI	O	Indication control	49	/RST	O	System reset signal output
8	STDBY	O	Indication control	50	NC	--	Non connection
9	NC	--	Non connection	51	NC	--	Non connection
10	NC	--	Non connection	52	/RESET SW	I	CD mech. rest switch input
11	NC	--	Non connection	53	MLD	O	µ.-com comand road signal output
12	PBEQ	O	Play equalizer select output	54	MDATA	O	µ.-com comand data signal output
13	MSIN	I	Music scan signal input	55	MCLK	O	µ.-com comand clock signal output
14	NR	O	Dolby ON/OFF control	56	DATA	O	Data signal output for changer µ.-com
15	CAPN	O	Capstan (ON/OFF) control	57	SCK	O	CLock signal output for changer µ.-com
16	BPLZ	O	B mech.pranger control output	58	CHST	O	Strove signal output for changer µ.-com
17	APLZ	O	A mech.pranger control output	59	REQI	I	Redy signal input from changer µ.-com
18	FADE	O	FADE mode control	60	NC	--	Non conection
19	AMT	O	It is "H" when Deck A is not playing	61	NC	--	Non connection
20	BMT	O	It is "H" when Deck B is not playing	62	NC	--	Non connection
21	OMT	O	Deck P.B mute control signal	63	GND	--	GND
22	RMT	O	Rec. P.B select signal output	64	NC	--	Non connection
23	GND	--	GND	65	NC	--	Non connection
24	PB/REC	O	It is "H" when NR recording	66	NC	--	Non connection
25	REC	O	It is "H" when recording	67	NC	--	Non connection
26	BIAS	O	REC bias ON/OFF control	68	RESET	I	System reset signal input
27	NC	--	Non connection	69	GND	--	GND
28	NC	--	Non connection	70	NC	--	Non connection
29	NC	--	Non connection	71	GND	--	GND
30	NC	--	Non connection	72	OSC	--	Osilaltion terminal(6MHz)
31	NC	--	Non connection	73	OSC	--	Osilaltion terminal(6MHz)
32	GND	--	Connection to the ground	74	VDD	--	Power suplly
33	GND	--	Connection to the ground	75	DCS OUT	O	DCS signal output
34	GND	--	Connection to the ground	76	DCS IN	I	DCS signal input
35	GND	--	Connection to the ground	77	APLS	I	A mech. reel palse input
36	GND	--	Connection to the ground	78	PSWA	O	A mech. play switch output
37	GND	--	Connection to the ground	79	BEQ	O	Bias current and Playing EQ control
38	GND	--	Connection to the ground	80	PSWB	I	B mech. play switch output
39	GND	--	Connection to the ground	81	PBLS	I	B mech. reel palse input
40	COMRDY	O	Redy signal output to IC701	82	FREC	I	FREC switch detect input
41	COMCLK	O	Clock signal for IC701	83	RREC	I	RREC switch detect input
42	COMDT1	I	Data 1 signal from IC701	84	BPACK	I	BPACKswitch detect input

■ UPD65612GB-165(IC801) : Changer Controller

1. Terminal Layout

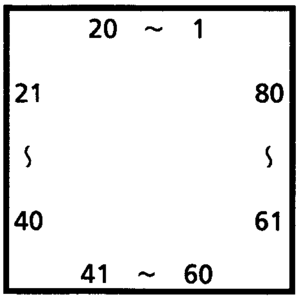


2. Pin Functions

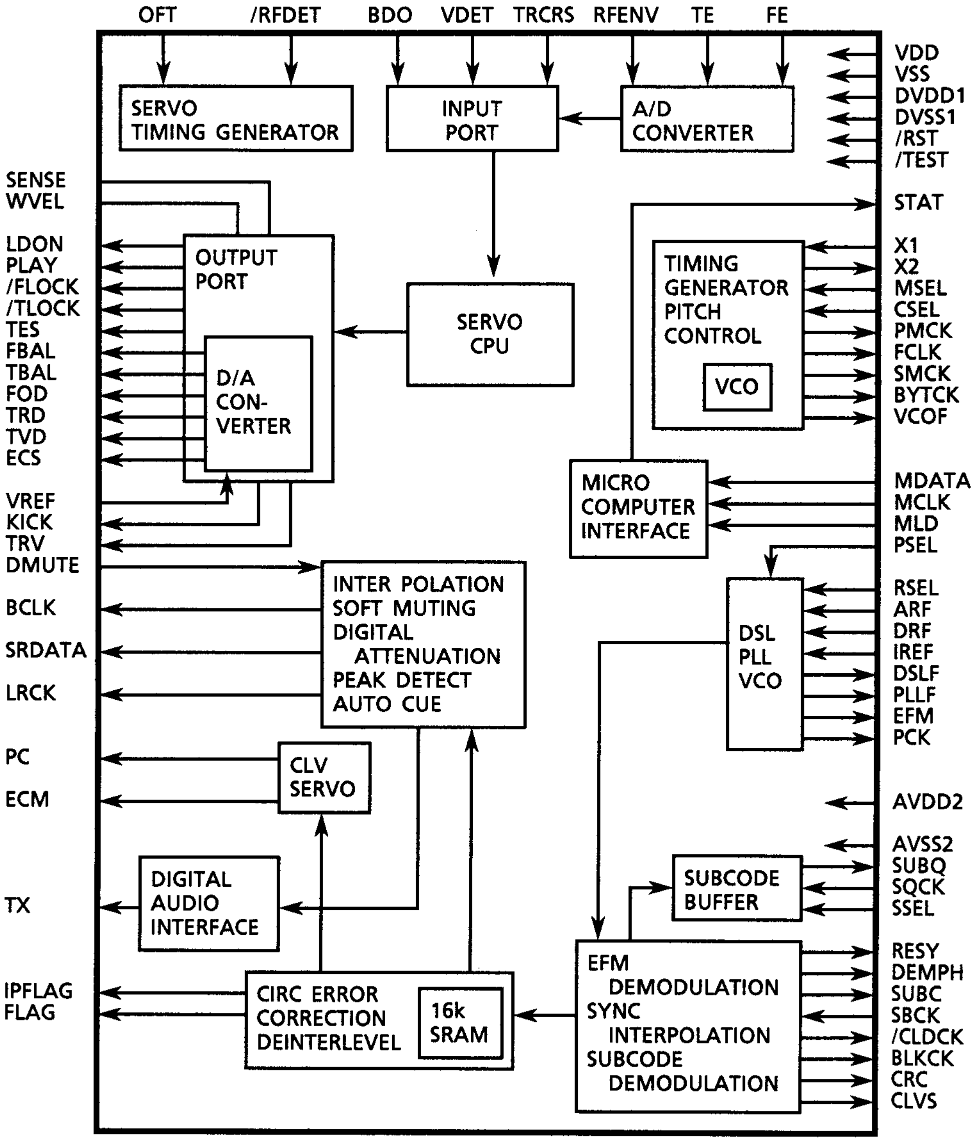
Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	NC	--	Non connection	23	2SSW	I	TRAY2 switch input signal
2	NC	--	Non connection	24	1SSW	I	TRAY1 switch input signal
3	NC	--	Non connection	25	NC	--	Non connection
4	OS1I	I	Oscillation terminal	26	CAM0	I	Cam switch input signal for LCAM
5	OS1O	O	Oscillation terminal	27	CAM1	I	Cam switch input signal for LCAM
6	OS2I	I	Oscillation terminal	28	CAM2	I	Cam switch input signal for LCAM
7	OS2O	O	Oscillation terminal	29	CAM3	I	Cam switch input signal for LCAM
8	NC	--	Non connection	30	CAM4	I	Cam switch input signal for RCAM
9	C25IN	I	Connected to C25OUT	31	CAM5	I	Cam switch input signal for RCAM
10	C25OUT	O	Connected to C25IN	32	CAM6	I	Cam switch input signal for RCAM
11	RESET	I	Reset signal input	33	CAM7	I	Cam switch input signal for RCAM
12	REQ	O	Output the "mecha. data request"	34	FIT	O	Connected to C50
13	DATA	I/O	Control,Status data I/O	35	C50	I	Connected to FIT
14	ST	I	Strobe signal input	36	LMUP	O	L motor control signal
15	CKS	I	Clock input	37	LMDWN	O	L motor control signal
16	SELECT	--	Connected to GND	38	C25	--	Non connection
17	GND	--	GND	39	VDD	--	Power supply terminal
18	CK	--	Connected to GND	40	C100	--	Non connection
19	1MSW	I	TRAY1 switch input signal	41	RMUP	O	R motor control signal
20	2MSW	I	TRAY2 switch input signal	42	RMDWN	O	R motor control signal
21	3MSW	I	TRAY3 switch input signal	43	NC	--	Non connection
22	3SSW	I	TRAY3 switch input signal	44	NC	--	Non connection

■ MN35510 (IC603) : DIGITAL SERVO & DIGITAL SIGNAL PROCESSOR

1. Terminal Layout


20 ~ 1
21
80
40
61
41 ~ 60

2. Block Diagram


OFT
/RFDET
BDO
VDET
TRCRS
RFENV
TE
FE
SERVO TIMING GENERATOR
INPUT PORT
A/D CONVERTER
VDD
VSS
DVDD1
DVSS1
/RST
/TEST
STAT
SENSE
WVEL
LDON
PLAY
/FLOCK
/TLOCK
TES
FBAL
TBAL
FOD
TRD
TVD
ECS
OUTPUT PORT
D/A CON-VERTER
SERVO CPU
TIMING GENERATOR PITCH CONTROL
VCO
X1
X2
MSEL
CSEL
PMCK
FCLK
SMCK
BYTCK
VCOF
MICRO COMPUTER INTERFACE
MDATA
MCLK
MLD
PSEL
VREF
KICK
TRV
DMUTE
INTER POLATION SOFT MUTING DIGITAL ATTENUATION PEAK DETECT AUTO CUE
BCLK
SRDATA
LRCK
DSL PLL VCO
RSEL
ARF
DRF
IREF
DSLF
PLLF
EFM
PCK
PC
ECM
CLV SERVO
AVDD2
AVSS2
SUBQ
SQCK
SSEL
SUBCODE BUFFER
TX
DIGITAL AUDIO INTERFACE
IPFLAG
FLAG
CIRC ERROR CORRECTION DEINTERLEVEL
16k SRAM
EFM DEMODULATION SYNC INTERPOLATION SUBCODE DEMODULATION
RESY
DEMPH
SUBC
SBCK
/CLDCK
BLKCK
CRC
CLVS

3. Pin Functions

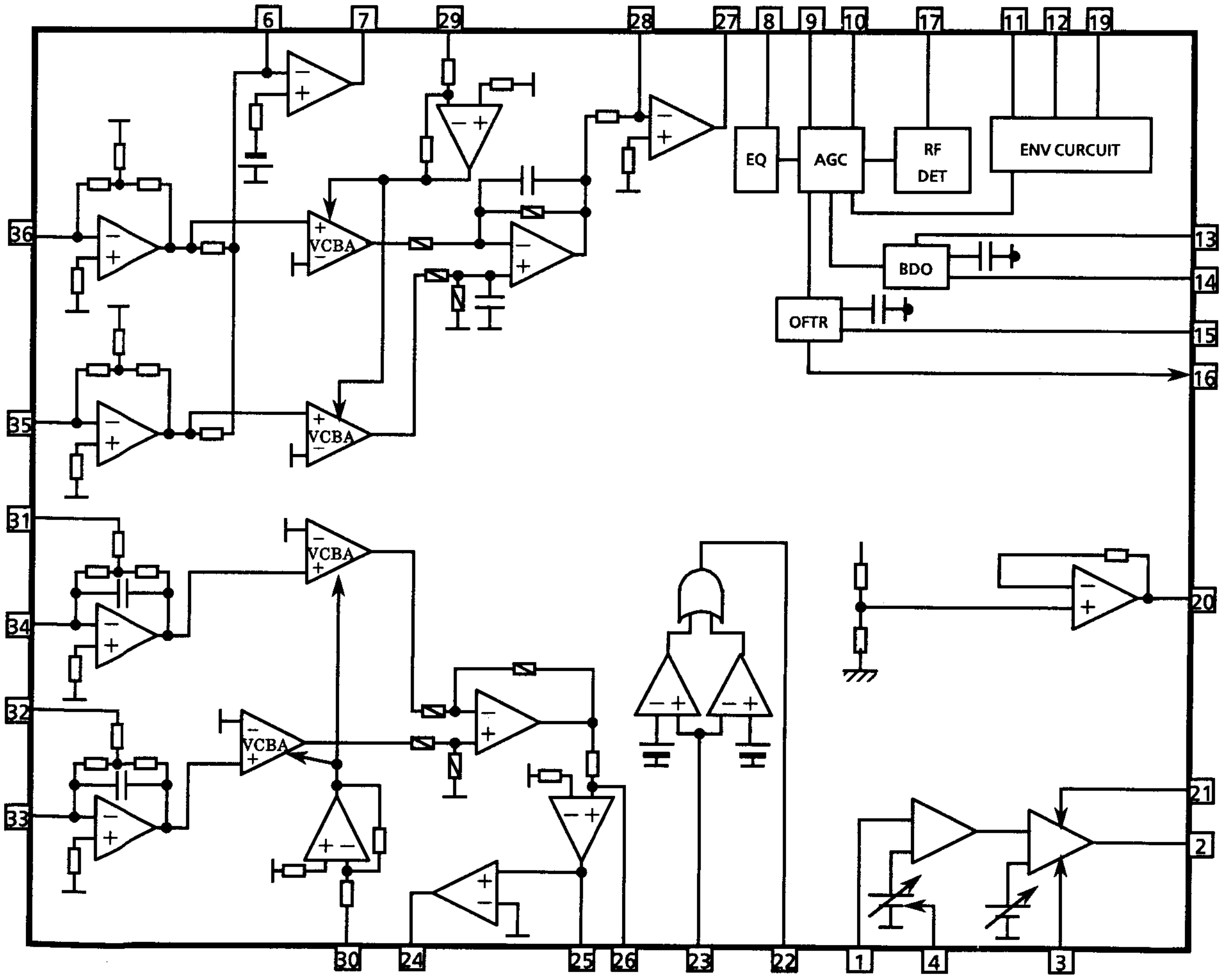
Pin No.	symbol	I/O	Function	Pin No.	symbol	I/O	Function
1	BCLK	O	Not used	41	TES	O	Tracking error shunt signal output (H;shunt)
2	LRCK	O	Not used	42	PLAY	—	Not used
3	SRDATA	O	Not used	43	WVEL	—	Not used
4	DVDD1	—	Power supply(Digital)	44	ARF	I	RF signal input
5	DVSS1	—	Not used	45	IREF	I	Reference current input pin
6	TX	O	Not used	46	DRF	I	Bias pin for DSL
7	MCLK	I	µ-com command clock signal input (Data is latched at signal's rising point)	47	DSLF	I/O	Loop filter pin for DSL
8	MDATA	I	µ-com command data input	48	PLLF	I/O	Loop filter pin for PLL
9	MLD	I	µ-com command load signal input	49	VCOF	—	Not used
10	SENSE	O	Not used	50	AVDD2	—	Power supply (Analog)
11	FLOCK	O	Not used	51	AVSS2	—	Connected to GND(Analog)
12	TLOCK	O	Not used	52	EFM	—	Not used
13	BLKCK	O	Subcode · block · clock signal output	53	PCK	—	Not used
14	SQCK	I	Outside lock for sub-code Q resister input	54	PDO	—	Not used
15	SUBQ	O	Sub-code Q-code output	55	SUBC	—	Not used
16	DMUTE	—	Connected to GND	56	SBCK	—	Not used
17	STATUS	O	Status signal (CRC,CUE,CLVS,TTSTOP,ECLV,SQOK)	57	VSS	—	Connected to GND(for X'tal cscillation circuit)
18	RST	I	Reset signal input (L :Reset)	58	X1	I	Input of 16.9344MHz X'tal oscillation circuit
19	SMCK	—	Not used	59	X2	O	Output of X'tal oscillation circuit
20	PMCK	—	Not used	60	VDD	—	Power supply(for X'tal cscillation circuit)
21	TRV	O	Traverse enforced output	61	BYTCK	—	Not used
22	TVD	O	Traverse drive output	62	CLDCK	—	Not used
23	PC	—	Not used	63	FCLK	—	Not used
24	ECM	O	Spindle motor drive signal (Enforced mode output) 3-State	64	IPPLAG	—	Not used
25	ECS	O	Spindle motor drive signal (Servo error signal output)	65	FLAG	—	Not used
26	KICK	O	Kick pulse output	66	CLVS	—	Not used
27	TRD	O	Tracking drive output	67	CRC	—	Not used
28	FOD	O	Focus drive output	68	DEMPH		Not used
29	VREF	I	Reference voltage input pin for D/A output block(TVD,FOD,FBAL,TBAL)	69	RESY	—	Not used
30	FBAL	O	Focus Balance adjust signal output	70	IOSEL	—	Pull up
31	TBAL	O	Tracking Balance adjust signal output	71	TEST	—	Pull up
32	FE	I	Focus error signal input(Analog input)	72	AVDD1	—	Power supply (Digital)
33	TE	I	Tracking error signal input(Analog input)	73	OUT L	O	Lch audio output
34	RF ENV	I	RF envelope signal input(Analog input)	74	AVSS1	—	Connected to GND
35	VDET	I	Vibration detect signal input(H : detect)	75	OUT R	O	Rch audio output
36	OFT	I	Off track signal input(H : off track)	76	RSEL	—	Pull up
37	TRCRS	I	Track cross signal input	77	CSEL	—	Connected to GND
38	RFDET	I	RF detect signal input (L : detect)	78	PSEL	—	Connected to GND
39	BDO	I	BDO input pin (H : drop out)	79	MSEL	—	Connected to GND
40	LDON	O	Laser ON signal output (H : on)	80	SSEL	—	Not used

■ AN8806SB (IC601) : RF & SERVO AMP

1. Terminal Layout

PD	1	36	PDAC
LD	2	35	PDBD
LDON	3	34	PDE
LDP	4	33	PDF
VCC	5	32	PDER
RF-	6	31	PDFR
RF OUT	7	30	TBAL
RF IN	8	29	FBAL
C.AGC	9	28	FE-
ARF	10	27	FE OUT
C.ENV	11	26	TE-
C.EA	12	25	TE OUT
CS BDO	13	24	CROSS
BDO	14	23	TE BPF
CS BRT	15	22	VDET
OFTR	16	21	LD OFF
/NRFDET	17	20	VREF
GND	18	19	ENV

2. Block Diagram



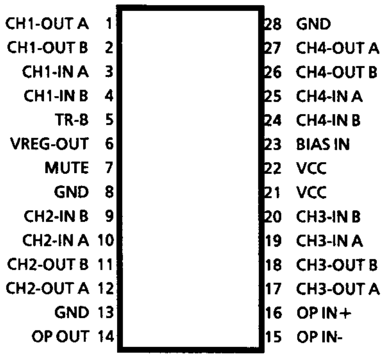
6
7
29
28
27
8
9
10
17
11
12
19
EQ
AGC
RF DET
ENV CURCUIT
BDO
OFTR
VCBA
VCBA
VCBA
VCBA
36
35
31
34
32
33
13
14
15
16
20
21
2
30
24
25
26
23
22
1
4
3

3. Pin Functions

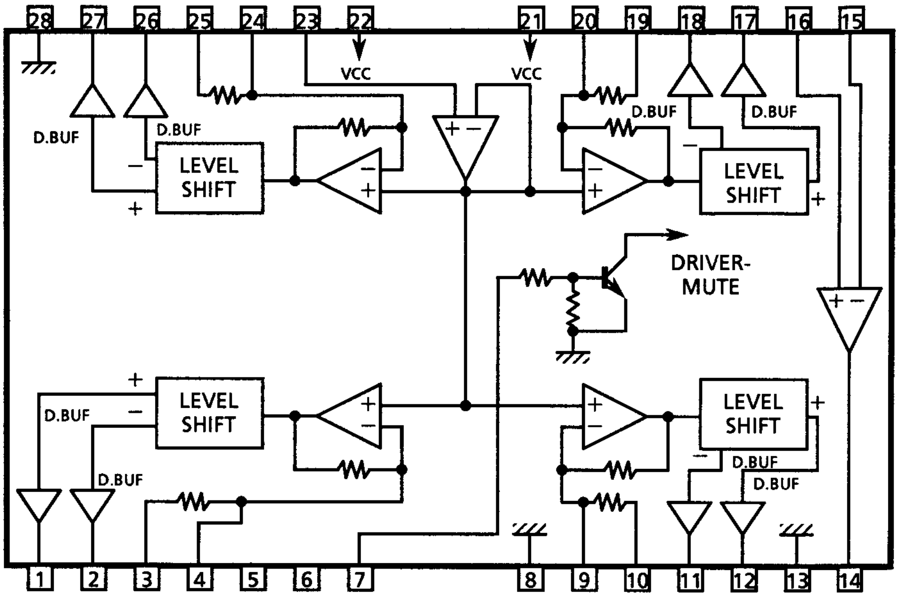
Pin No.	Symbol	I/O	Function
1	PD	I	APC amp input terminal
2	LD	O	APC amp output terminal
3	LD ON	I	APC ON/OFF control terminal
4	LDP	--	Connected to ground
5	VCC	--	Power supply
6	RF-	I	Inverse input pin for RF amp
7	RF OUT	O	RF amp output
8	RF IN	I	RF input
9	C.AGC	I/O	Connecting pin of AGC loop filter
10	ARF	O	RF output
11	C.ENV	I/O	A capacitor is connected to this terminal to detect the envelope of RF signal
12	C.EA	I/O	A capacitor is connected to this terminal to detect the envelope of RF signal
13	CS BDO	I/O	A capacitor is connected to detect the lower envelope of the RF signal
14	BDO	O	BDO output pin
15	CS BRT	I/O	A capacitor is connected to detect the lower envelope of the RF signal
16	OFTR	O	Of-track status signal output
17	/NRFDET	O	RF detection signal output
18	GND	--	Ground
19	ENV	O	Envelope output
20	VREF	O	Reference voltage output
21	LD OFF	--	Connect to ground
22	VDET	O	Vibration detection signal output
23	TE BPF	I	Input pin of tracking error through BPF
24	CROSS	O	Tracking error cross output
25	TE OUT	O	Tracking error signal output
26	TE-	I	Inverse input pin for tracking error amp
27	FE OUT	O	Output pin of focus error
28	FE-	I	Inverse input pin for focus error amp
29	FBAL	I	Focus balance control
30	TBAL	I	Tracking balance control
31	PDFR	--	Non connection
32	PDER	--	Non connection
33	PDF	I	I-V amp input
34	PDE	I	I-V amp input
35	PD BD	I	I-V amp input
36	PD AC	I	I-V amp input

■ BA6397FPW(IC602) : BTL DRIVER

1. Terminal Layout


CH1-OUT A 1
CH1-OUT B 2
CH1-IN A 3
CH1-IN B 4
TR-B 5
VREG-OUT 6
MUTE 7
GND 8
CH2-IN B 9
CH2-IN A 10
CH2-OUT B 11
CH2-OUT A 12
GND 13
OP OUT 14
28 GND
27 CH4-OUT A
26 CH4-OUT B
25 CH4-IN A
24 CH4-IN B
23 BIAS IN
22 VCC
21 VCC
20 CH3-IN B
19 CH3-IN A
18 CH3-OUT B
17 CH3-OUT A
16 OP IN+
15 OP IN-

2. Block Diagram

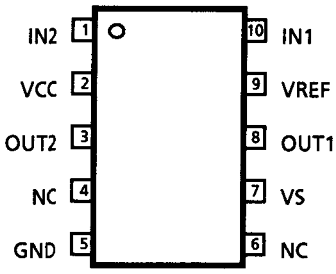

28
27
26
25
24
23
22
21
20
19
18
17
16
15
VCC
VCC
D.BUF
D.BUF
D.BUF
D.BUF
LEVEL SHIFT
LEVEL SHIFT
LEVEL SHIFT
LEVEL SHIFT
DRIVER-MUTE
D.BUF
D.BUF
D.BUF
D.BUF
1
2
3
4
5
6
7
8
9
10
11
12
13
14

3.Pin Functions

Pin No.	Symbol	I/O	Functions
1 2	CH1-OUT A CH1-OUT B	O	Focus drive output
3	CH1-IN A	—	Non connection
4	CH1-IN B	I	FOD input
5	TR-B	O	Transistor control
6	VREG-OUT	O	Referrence voltage output
7	MUTE	I	Mute signal input pin
9 20	CH2-IN B CH3-IN B	I I	Spindle motor drive input Feed motor drive input
11 12	CH2-OUT B CH2-OUT A	O	Spindle motor drive output
24	CH4-IN B	I	Feed motor drive input

Pin No.	Symbol	I/O	Functions
8,13,28	GND	—	GND
10 14 15 16 19 25	CH2-IN A OPOUT OPIN- OPIN+ CH3-IN A CH4-IN A	—	Non connection
17 18	CH3-OUT A CH3-OUT B	O	Feed motor drive output
21,22	Vcc	—	Power supply
23	BIAS IN	I	Input pin of Bias
26 27	CH4-OUT B CH4-OUT A	O	Tracking drive output

■ TA8409F (IC802,IC803) : DC Motor driver

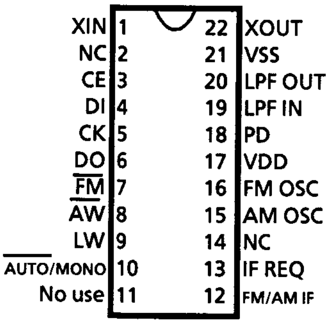

IN2 1
VCC 2
OUT2 3
NC 4
GND 5
10 IN1
9 VREF
8 OUT1
7 VS
6 NC

INPUT		OUTPUT		MODE
IN1	IN2	OUT1	OUT2	
0	0	∞	∞	stop
1	0	H	L	open
0	1	L	H	clpose
1	1	L	L	break

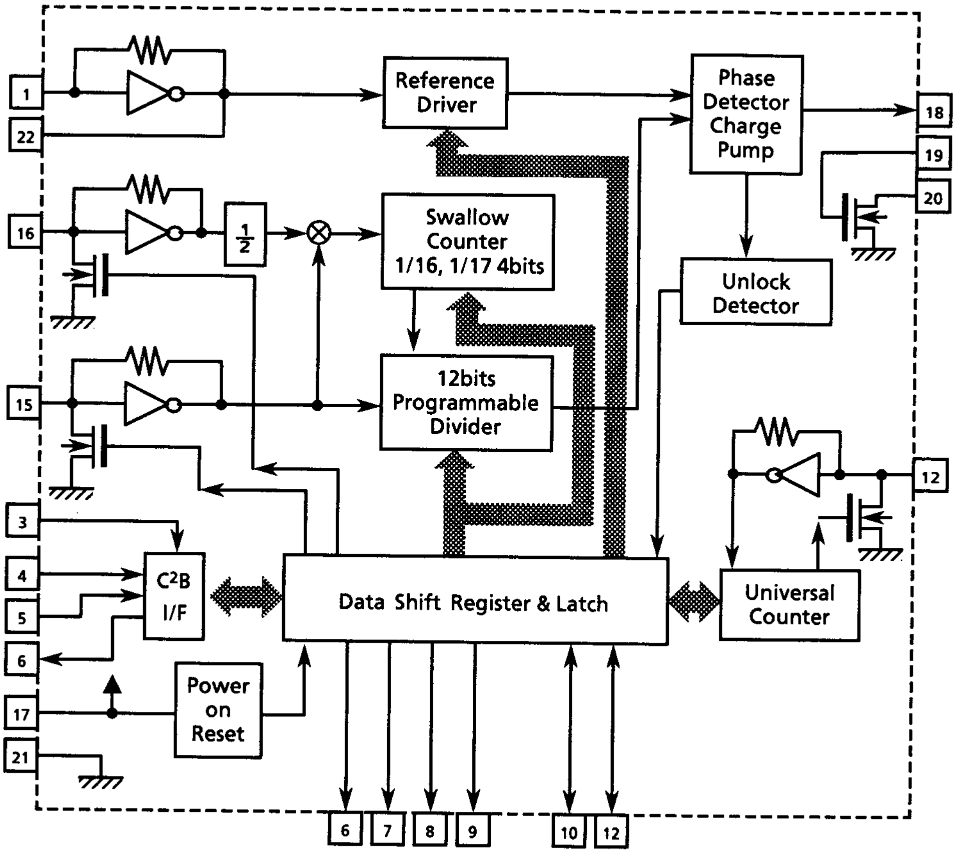
∞--High impeadance

■ LC72131 (IC121) : PLL Synthesizer

1. Terminal Layout


XIN 1
NC 2
CE 3
DI 4
CK 5
DO 6
FM 7
AW 8
LW 9
AUTO/MONO 10
No use 11
22 XOUT
21 VSS
20 LPF OUT
19 LPF IN
18 PD
17 VDD
16 FM OSC
15 AM OSC
14 NC
13 IF REQ
12 FM/AM IF

2. Block Diagram


1
22
16
15
3
4
5
6
17
21
1/2
Reference Driver
Swallow Counter 1/16, 1/17 4bits
12bits Programmable Divider
Phase Detector Charge Pump
Unlock Detector
C2B I/F
Power on Reset
Data Shift Register & Latch
Universal Counter
18
19
20
12
6
7
8
9
10
12

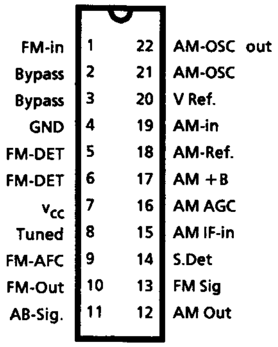
3. Pin Functions

Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	X in	I	Crystal oscillator (7.2MHz).	12	FM/AM IF	I	Universal counter input
3	CE	I	Fix the chip enable to "H" when inputting (DI) and outputting (DO) the serial data.	13	IF REQ	O	Output the "IF-signal request" to IC102
4	DI	I	Receive the control data from the controller (IC701).	15	AM IN	I	Input the local oscillator signal of AM.
5	CK	I	This clock is used to synchronize data when transmitting the data of DI and DO.	16	FM IN	I	Input the local oscillator signal of FM.
6	DO	O	Transmit the data from LC72131 to the controller which is synchronized with CK.	17	VDD	--	This is a terminal of power supply.
7	FM	O	It is "L" on FM mode.	18	PD	O	PLL charge pump output : When the local oscillator signal frequency is higher than the reference frequency high level signals will output. When it is lower than the reference frequency, low level signals will output. When it is same as reference frequency signals, it will be floating.
8	MW	O	It is "L" on MW mode.	19	LPF IN	I	Transistor used for the PLL active low-pass filterr
9	LW	O	It is "H" on LW mode.	20	LPF OUT	O	Transistor used for the PLL active low-pass filterr
10	AUTO/ MONO	O	It is "H" on monaural, "L" on auto.	21	VSS	--	Connected to GND
11	NO USE	O		22	X out	O	Crystal oscillator (7.2MHz).

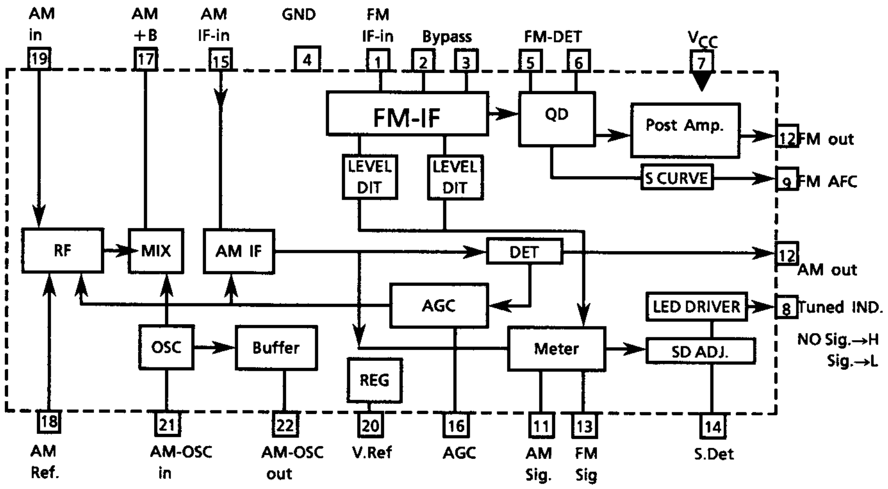
■ LA1266 (IC104) : FM AM IF AMP & detector

1. The main function descriptions
   (1) Amplify and detect of FM intermodulation frequencies.
   (2) It has local oscillator and mixer for AM, and amplify the AM-IF signal.

2. Pin Layout


FM-in 1
Bypass 2
Bypass 3
GND 4
FM-DET 5
FM-DET 6
Vcc 7
Tuned 8
FM-AFC 9
FM-Out 10
AB-Sig. 11
22 AM-OSC out
21 AM-OSC
20 V Ref.
19 AM-in
18 AM-Ref.
17 AM +B
16 AM AGC
15 AM IF-in
14 S.Det
13 FM Sig
12 AM Out

3. Block Diagram


AM in 19
AM +B 17
AM IF-in 15
GND 4
FM IF-in 1
Bypass 2 3
FM-DET 5 6
Vcc 7
FM-IF
QD
Post Amp.
12 FM out
S CURVE
9 FM AFC
LEVEL DIT
LEVEL DIT
RF
MIX
AM IF
DET
12 AM out
AGC
LED DRIVER
8 Tuned IND.
NO Sig.→H
Sig.→L
OSC
Buffer
REG
Meter
SD ADJ.
18 AM Ref.
21 AM-OSC in
22 AM-OSC out
20 V.Ref
16 AGC
11 AM Sig.
13 FM Sig
14 S.Det

4. Pin Functions

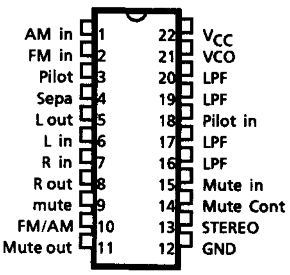
Pin No.	Symbol	I/O	Function
1	FM in	I	This is an input terminal of FM IF Signal.
2,3	Bypass	--	Bypass of FM IF Amp.
4	GND	--	This is the device ground terminal.
5,6	FM DET	--	FM detect transformer.
7	V_{CC}	--	This is the power supply terminal.
8	SIG	O	Auto -stop drive signal output for mute and tune
9	FM AFC	O	This is an output terminal of voltage for FM - AFC.
10	FM IF out	O	When the signal of IF REQ of IC121(LC72131) applied to pin12, the signal of FM IF does output.
11	AM IF out	O	When the signal of IF REQ of IC121(LC72131) applied to pin12, the signal of AM IF does output.
12	FM out	O	FM detection output.
13	STRQ	I	The IF-signals come out from pin10 (FM-IF) or pin11 (AM-IF) while this terminal going to "High".
14	NAR SM	--	Control the Band-width of signal meter.
15	AM out	O	AM detection output.
16	FM Adj	--	For adjust the stop level (or mute level) of FM.
17	AM Adj	--	For adjust the stop level (or mute level) of AM.
18	AM-IF	I	Input of AM IF Signal.
19	AM-AGC	I	This is an AGC voltage Input terminal for AM.
20	AM-MIX	O	This is an output terminal for AM mixer.
21	AM-IN	I	This is an input terminal for AM RF Signal.
22	V.REF	--	Resister value between pin9 and pin22 desides the frequency width of the inputsignal
23	AM-OSC	--	This is a terminal of AM Local oscillation circuit.
24	AM-OSC out	O	AM Local Oscillation Signal output.

■ LA3401 (IC105) : FM MPX Detector

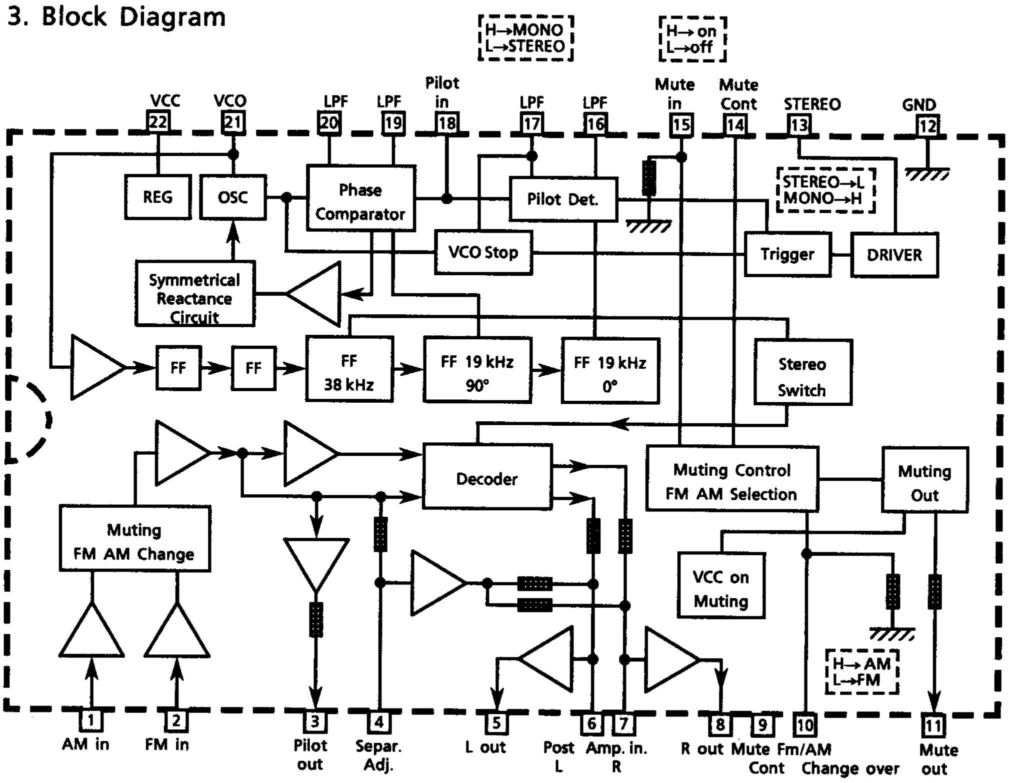
1. The main function descriptions

(1) Detect the FM Multiplex Signal (Stereo signal).
(2) When receiving FM Stereo Signal, it outputs the signal for indicator.
(3) AM/FM Audio Amplifier.

2. Terminal Layout


AM in 1
FM in 2
Pilot 3
Sepa 4
L out 5
L in 6
R in 7
R out 8
mute 9
FM/AM 10
Mute out 11
22 Vcc
21 VCO
20 LPF
19 LPF
18 Pilot in
17 LPF
16 LPF
15 Mute in
14 Mute Cont
13 STEREO
12 GND

3. Block Diagram

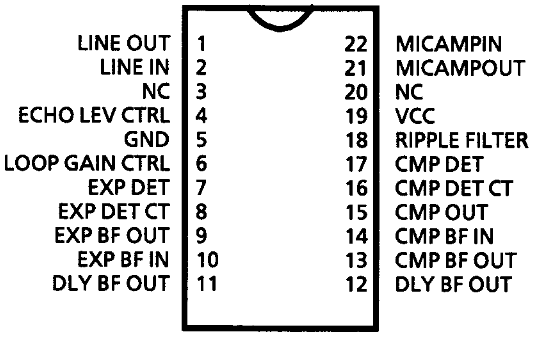

H→MONO
L→STEREO
H→on
L→off
VCC 22
VCO 21
LPF 20
LPF 19
Pilot in 18
LPF 17
LPF 16
Mute in 15
Mute Cont 14
STEREO 13
GND 12
REG
OSC
Phase Comparator
Pilot Det.
STEREO→L
MONO→H
VCO Stop
Trigger
DRIVER
Symmetrical Reactance Circuit
FF
FF
FF 38 kHz
FF 19 kHz 90°
FF 19 kHz 0°
Stereo Switch
Decoder
Muting Control FM AM Selection
Muting Out
Muting FM AM Change
VCC on Muting
H→AM
L→FM
1 AM in
2 FM in
3 Pilot out
4 Separ. Adj.
5 L out
6 Post L
7 Amp. in. R
8 R out
9 Mute Cont
10 Fm/AM Change over
11 Mute out

4. Pin Functions

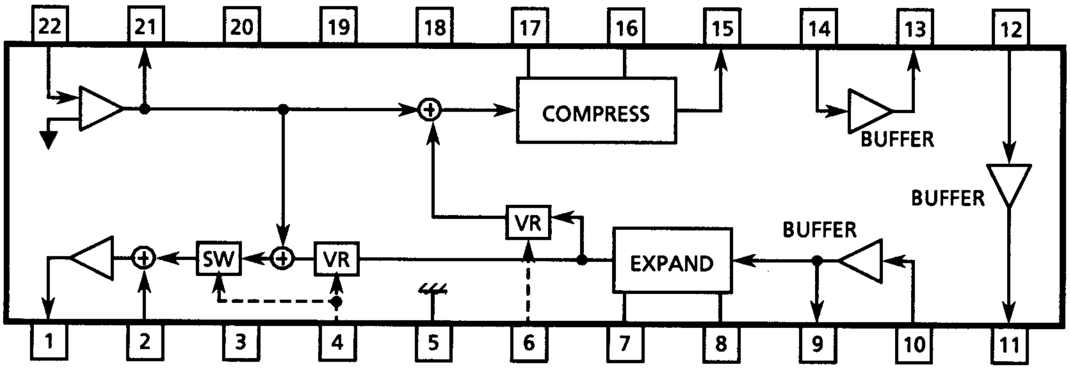
Pin No.	Symbol	I/O	Function
1	AM in	I	This is an input terminal for AM detection signal.
2	FM in	I	This is an input terminal for FM detection signal.
3	Pilot out	O	Output of MPX pilot signal (Connect to Pin18).
4	Sepa. Adj.	--	Separation adjustment.
5	L. out	O	Left channel signal output.
6	L	O	Reversal output of Pin5.
7	R	O	Reversal output of Pin8.
8	R out	O	Right channel signal output
9	Mute Cont	--	The mute time is controlled by the connected capacitor when turning the power switch on.
10	/FM, AM	I	Change over the FM / AM input. "H" : AM, "L" : FM
11	Mute out	--	Not use
12	GND	--	Ground terminal.
13	/Stereo	O	Stereo indicator output. Stereo : "L", Mono : "H"
14	Mute Cont	--	The mute time is controlled by the connected capacitor when changing over the FM / AM .
15	Mute in	I	MutE signal input."H" : Mute on, "L" : Mute off.
16	LPF	--	Low pass filter of pilot detector.
17	LPF	--	While this terminal goes to "H", the VCO stop.
18	Pilot in	I	Pilot input.
19	LPF	--	Low-pass filter of PLL.
20	LPF	--	Low-pass filter of PLL.
21	VCO	I	Voltage controlled oscillator terminal.
22	V_{CC}	--	Power supply.

■ BA7725S (IC951) : Echo circuit ANALOG COMPANTOR (For U,UT,US only)

1.Terminal Layout


LINE OUT 1
LINE IN 2
NC 3
ECHO LEV CTRL 4
GND 5
LOOP GAIN CTRL 6
EXP DET 7
EXP DET CT 8
EXP BF OUT 9
EXP BF IN 10
DLY BF OUT 11
22 MICAMPIN
21 MICAMPOUT
20 NC
19 VCC
18 RIPPLE FILTER
17 CMP DET
16 CMP DET CT
15 CMP OUT
14 CMP BF IN
13 CMP BF OUT
12 DLY BF OUT

2.Block Diagram

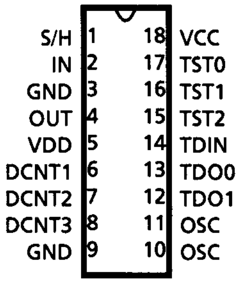

22
21
20
19
18
17
16
15
14
13
12
COMPRESS
BUFFER
BUFFER
VR
BUFFER
SW
VR
EXPAND
1
2
3
4
5
6
7
8
9
10
11

3.Pin Functions

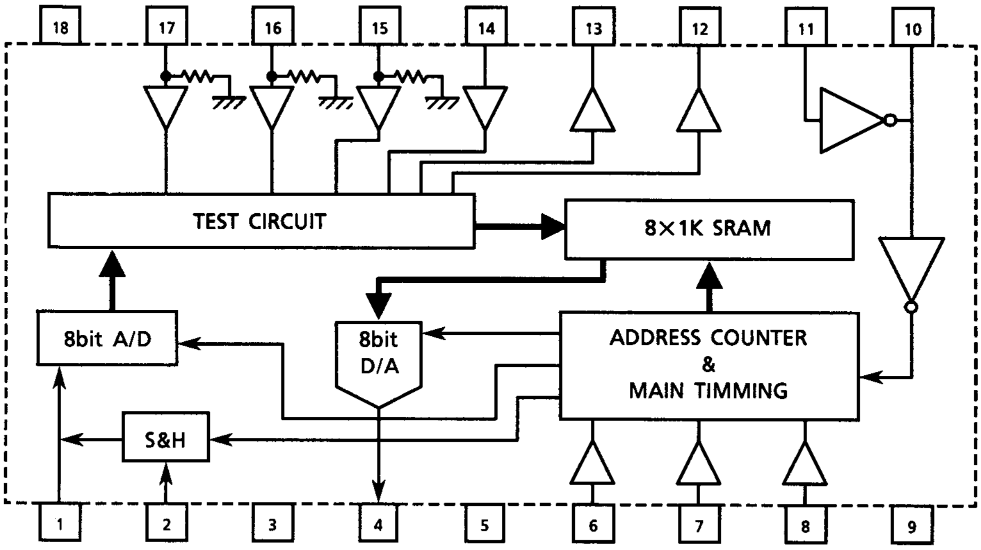
Pin No.	Symbol	I/O	Function
1	LINE OUT	O	Line output
2	LINE IN	I	Line input
3	NC	--	Not used
4	ECHO LEV CTRL	I	Determines echo level. The echo circuit is off when 1 volt is added. The echo level varies according to the voltage from 2 volts to 9 volts.
5	GND	--	Analog GND
6	LOOP GAIN CTRL	I	Loop gain control terminal. The gain baries according to the voltage from 2 volts to 9 volts.
7	EXP DET	I	Detection terminal for expand circuit
8	EXP DET CT	I	Determines the atack and recovery time of expand circuit
9	EXP BF OUT	O	Buffer output for LPF (Expand circuit side)
10	EXP BF IN	I	Buffer input for LPF (Expand circuit side)
11	DLY BF OUT	O	Delay buffer output
12	DLY BF IN	I	Delay buffer input
13	CMP BF OUT	O	Buffer output (Compress circuit side)
14	CMP BF IN	I	Buffer input (Compress circuit side)
15	CMP OUT	O	Compress circuit output
16	CMP DET CT	I	Determines the atack and recovery time of compress circuit
17	CMP DET	I	Detection terminal for compress circuit
18	RIPPLE FITER	I	A capacitor is connected for ripple ellimination filter
19	VCC	--	Power supply
20	NC	--	Not used
21	MIC AMP OUT	O	Mic amp output
22	MIC AMP IN	I	Mic amp input

■ BU9251S (IC952) : Delay Circuit (For U,UT,US only)

1.Terminal Layout


S/H 1
IN 2
GND 3
OUT 4
VDD 5
DCNT1 6
DCNT2 7
DCNT3 8
GND 9
18 VCC
17 TST0
16 TST1
15 TST2
14 TDIN
13 TDO0
12 TDO1
11 OSC
10 OSC

2.Block Diagram


18
17
16
15
14
13
12
11
10
TEST CIRCUIT
8×1K SRAM
8bit A/D
8bit D/A
ADDRESS COUNTER & MAIN TIMMING
S&H
1
2
3
4
5
6
7
8
9

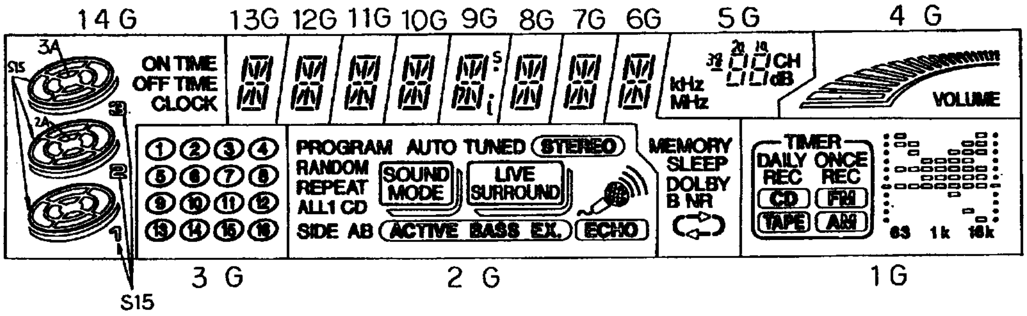
3.Pin Functions

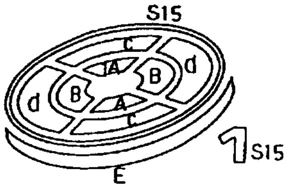
Pin No	Symbol	Function	Pin No	Symbol	Function
1	S&H	A capacitor is connected for sample & hold	10	OSC0	Oscillation terminal
2	AIN	Analog input	11	OSC1	Oscillation terminal
3	GND	GND	12	TDO1	Not used
4	AOUT	Analog output	13	TDO0	Not used
5	VDD	Power supply	14	TDIN	Not used
6	DCNT0	Pull up (+5V)	15	TST2	Not used
7	DCNT1	Pull up (+5V)	16	TST1	Not used
8	DCNT2	Pull up (+5V)	17	TST0	Not used
9	GND	GND	18	VCC	Power supply

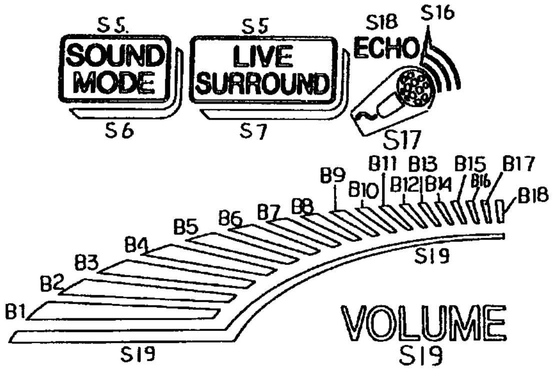
Internal Connections of FL Display

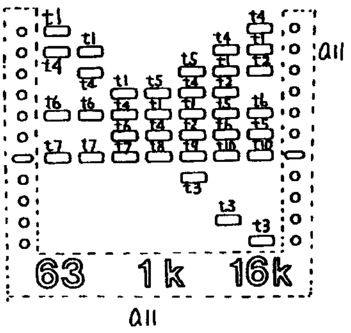
■ ELU0001-210 : (FL701)

1. Grid Layout


14 G
13G
12G
11G
10G
9G
8G
7G
6G
5G
4 G
ON TIME
OFF TIME
CLOCK
kHz
MHz
CH
dB
VOLUME
PROGRAM AUTO TUNED STEREO
RANDOM
REPEAT
ALL1 CD
SIDE AB
ACTIVE BASS EX.
ECHO
SOUND MODE
LIVE SURROUND
MEMORY
SLEEP
DOLBY
B NR
TIMER
DAILY ONCE
REC REC
CD FM
TAPE AM
63 1k 16k
3 G
2 G
1G
S15


S15
C
1A
B
d
A
E
S15


S5
S5
S18
S16
SOUND MODE
LIVE SURROUND
ECHO
S6
S7
S17
B1
B2
B3
B4
B5
B6
B7
B8
B9
B10
B11
B12
B13
B14
B15
B16
B17
B18
S19
VOLUME
S19
S19


t1
t2
t3
t4
t5
t6
t7
a11
63
1k
16k
a11

2. Pin Connections

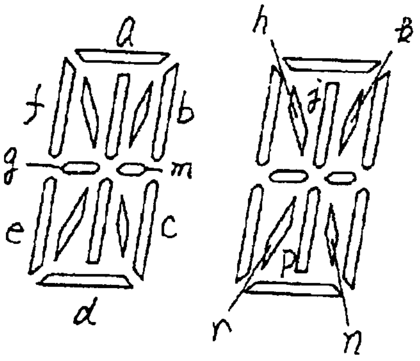
TERMINAL NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15					
ELECTRODE	F1	F1	F1	NP	P_{s1}	P_{s2}	P_{s3}	P_{s4}	P_{s5}	P_{s6}	P_{s7}	P_{s8}	P_{s9}	P_{s10}	P_{s11}					
TERMINAL NO.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
ELECTRODE	P_{s12}	NP	NP	NP	NP	NP	NP	NP	P_{a11}	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G
TERMINAL NO.							36	37	38	39	40	41	42	43	44	45	46	47	48	49
ELECTRODE							12G	13G	14G	P_{s13}	P_{s14}	P_{s15}	P_{s16}	P_{s17}	P_{s18}	P_{s19}	NP	F2	F2	F2

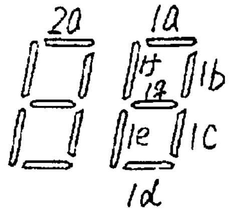
Notes F: Filament NP: No Pin
G: Grid
P: Anode

3. Anode Designation

	1G	2G	3G	4G	5G
S1	DAILY	TUNED		B18	CH
S2	ONCE	AUTO	①	B17	dB
S3		PROGRAM	②	B16	1a
S4	CD	RANDOM	③	B15	1b
S5	REC (ONCE	S5	④	B14	1f
S6	FM	S6 (SOUND MODE	⑤	B13	1g
S7	TAPE	S7(LIVE SURROUND	⑥	B12	1c
S8	AM	REPEAT	⑦	B11	1e
S9	t1	CD	⑧	B10	1d
S10	t2	[	⑨	B9	2a
S11	t3	ACTIVE BASS EX	⑩	B8	2b
S12	t4	ALL	⑪	B7	2f
S13	t5	B	⑫	B6	2g
S14	t6	A	⑬	B5	2c
S15	t7	SIDE	⑭	B4	2e
S16	t8	S16)))	⑮	B3	2d
S17	t9	S17	⑯	B2	KHz
S18	t10	ECHO		B1	MHz
S19		STEREO		S19	3g
all	all				

	6G	7~8G	9G	10~13G	14G
S1	a	a	a	a	3A
S2	b	b	b	b	3B
S3	j	j	j	j	3C
S4	h	h	h	h	3D
S5	k	k	k	k	3E
S6	f	f	f	f	2A
S7	g	g	g	g	2B
S8	m	m	m	m	2C
S9	c	c	c	c	2D
S10	n	n	n	n	2E
S11	p	p	p	p	1A
S12	r	r	r	r	1B
S13	e	e	e	e	1C
S14	d	d	d	d	1E
S15	SLEEP		t		s15
S16	DOLBY B NR				ON TIME
S17	⇄				OFF TIME
S18	( )				CLOCK
S19	MEMORY		s		1C
all					





Disassembly Procedures

(1) Top cover and heatsink cover removal

1. Remove 6 screws Ⓐon the rear side and 2 screws Ⓐ on both sides of the cover.
2. Remove the 2screws Ⓑ holding the heatsink cover
3. Remove the top cover and heatsink cover.

(2) Rear panel removal

1. Remove the top cover.
2. Remove the 2screws Ⓒ holding the CD changer mech. ass'y.
3. Remove the 10 screws Ⓑ.
4. Remove the rear panel.

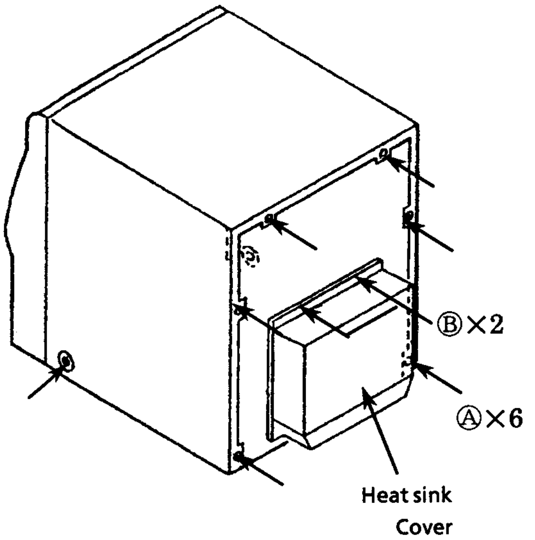


Fig.1

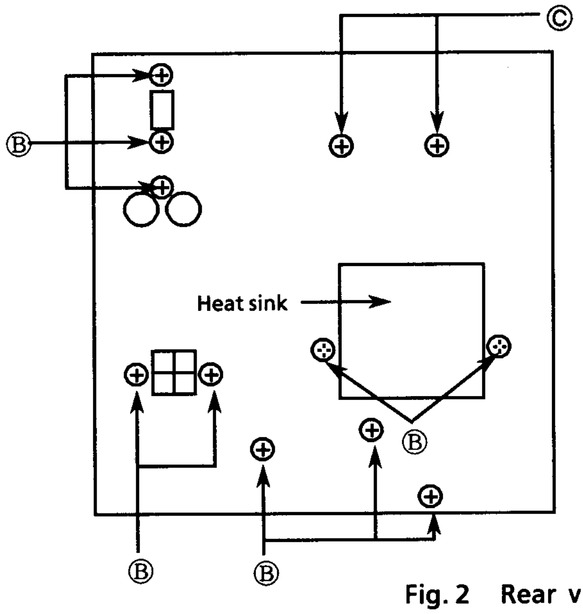


Fig. 2 Rear view

(3) CD changer mech. removal

1. Remove the rear panel.
2. Disconnect the CN603,CN604,CN801.
3. Remove the 2 screws Ⓓ holding the CD changer mech..
4. Remove the CD changer mech. ass'y.

(4) Tuner & Audio PCB (ENC-132-1) removal

1. Remove the CD changer mech. ass'y.
2. Remove the plastics rivet and Remove the ENC-132-4 .
3. Disconnect CN401(Flat wire) , CN514.
4. Disconnect CN513 and CN514.
5. Remove the Tuner & Audio PCB (ENC-132-1).

[Note]

Changer mech.ass,y needed connect the main PCB When servicing, so that the set can be movement.

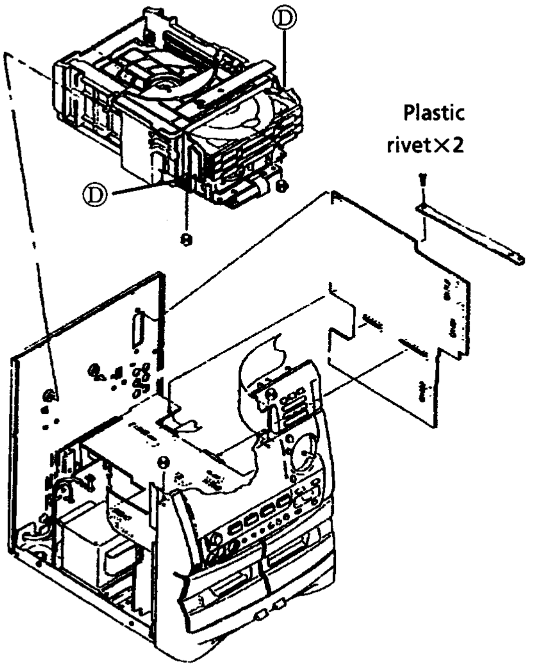


Fig. 3 Front view

Ⓐ .. SDSG3006M Ⓑ .... E73273-003 Ⓒ ... SBSF3008Z Ⓓ ... SBSG3008Z

(5) Deck & CD control PCB (ENH-292-1) removal

1. Remove the (1)(2)(3)(4).
2. Disconnect the CN901.
3. Remove the 3 screws Ⓔ holding the PCB and Remove the plastics rivet.
4. Raise up the PCB for disconnecting and you can remove the Deck & CD control PCB with the power amplifier PCB.

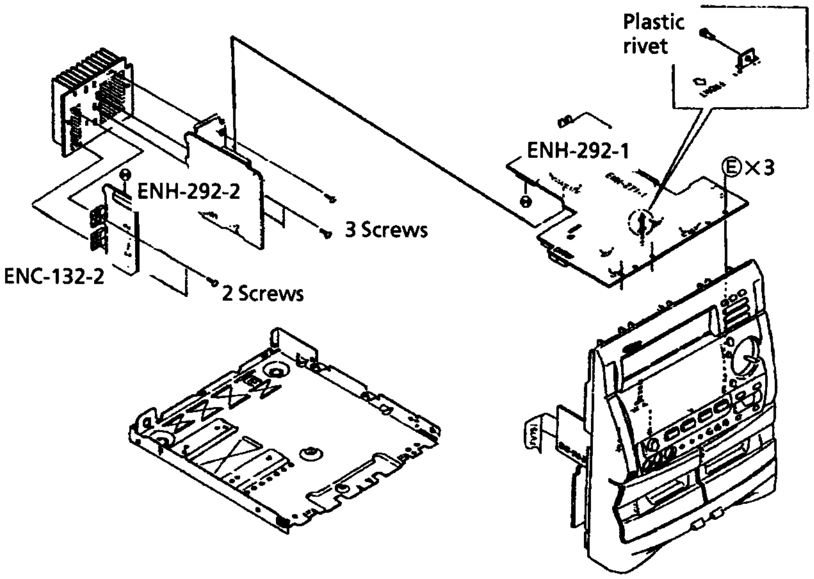

Plastic rivet
ENH-292-1
Ⓔ×3
ENH-292-2
3 Screws
ENC-132-2
2 Screws

Fig. 4

(6) Front PCB (ENB-235-1) removal.

1. Remove the (1)(2)(3)and(4) (5).
2. Remove the 3 hook of the bottom side and both side and remove the front panel ass'y.
3. Remove the 15 screws Ⓕ holding the bracket.
4. Remove the bracket and front PCB.

(7) Switch PCB(ENB-235-2) removal.

1. Remove the (1)(2)(3)and (4)(5)(6).
2. Remove the 7 screws holding the PCB.
3. Remove the switch PCB with the headphone PCB.

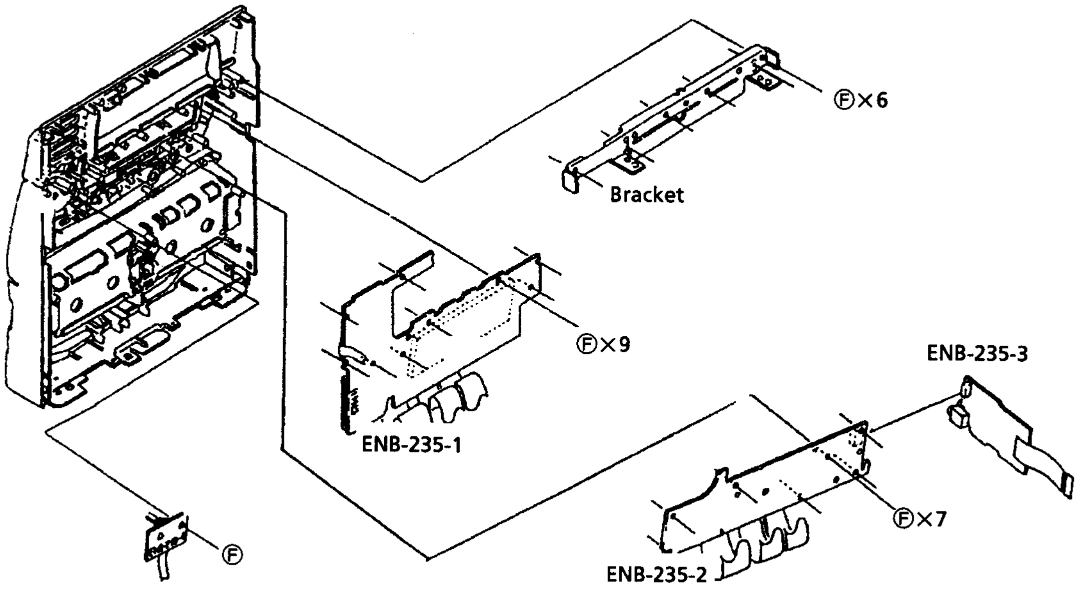

Ⓕ×6
Bracket
Ⓕ×9
ENB-235-3
ENB-235-1
Ⓕ×7
Ⓕ
ENB-235-2

Fig. 5

Ⓔ .. SPST2604Z Ⓕ ... CDSF2608Z

(8) Cassette mechanism with the PCB (ENC-132-3) removal

1. Remove the (1)(2)(3)and (4)(5).
2. Remove the 4 screws Ⓖ and 4 screws Ⓗ.
3. Remove the cassette mechanism.

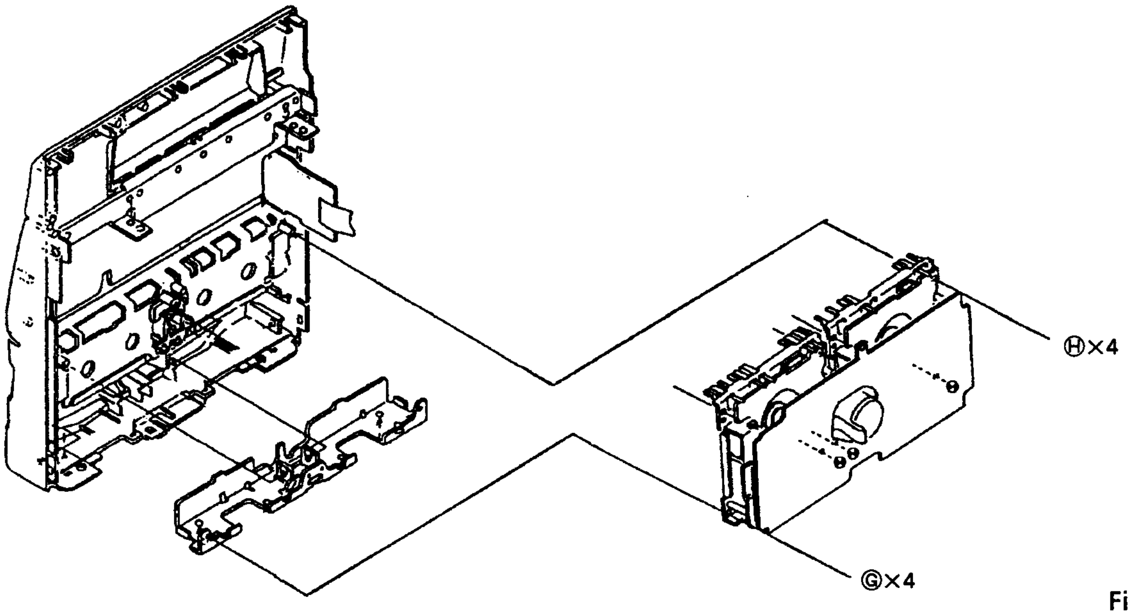


Fig. 6

(9) Cassette deck PCB (ENC-132-3) removal

1. Remove the (1),(2),(3)and (4),(5),(8).
2. Disconnect the CN331 and CN332.
3. Remove the 2 screws Ⓓ holding the PCB.
4. Remove the cassette deck PCB .

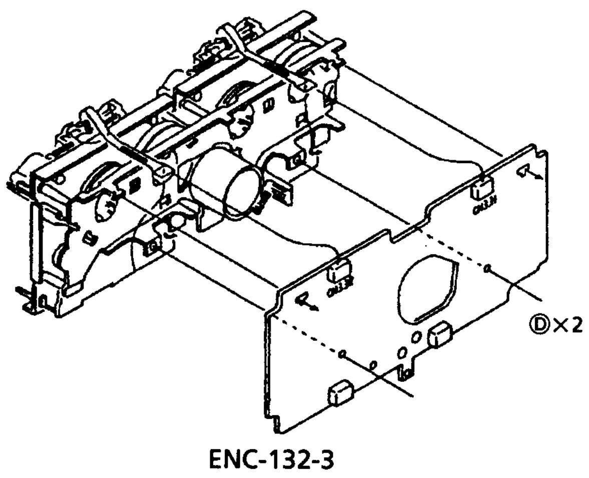


Fig. 7

(10) Cassette door lock plate removal

1. Remove the (1)(2)(3)and (4),(5),(8) .
2. Remove the spring.
3. Push up the E lever as shown in the figure below (Fig . 8) and remove the door lock plate.

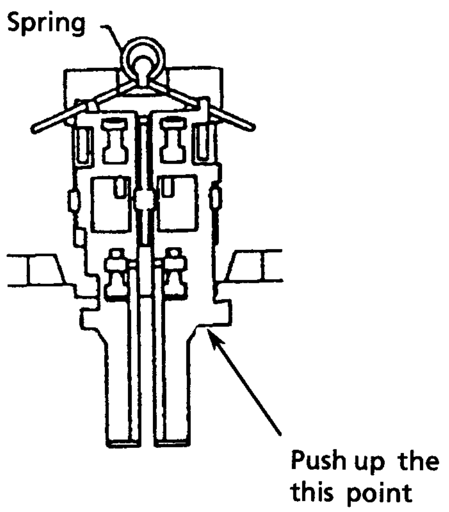


Fig. 8

Ⓓ .. SBSG3008Z Ⓖ ... SBST3006Z Ⓗ ... SBSF3008Z

(11) Damper removal

1. Remove the cassette mechanism.
2. Remove the spring holding the cassette holder.
3. Press the tab which secures the damper to remove the damper.(See the arrow shown in the figure below)

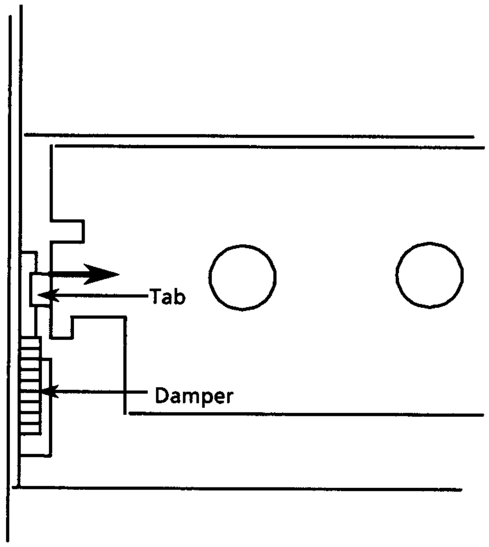


Fig. 9

(12) Cassette holder removal

1. Remove the cassette mechanism assembly.
2. Remove the spring holding the cassette holder.
3. Remove the Cassette holder .

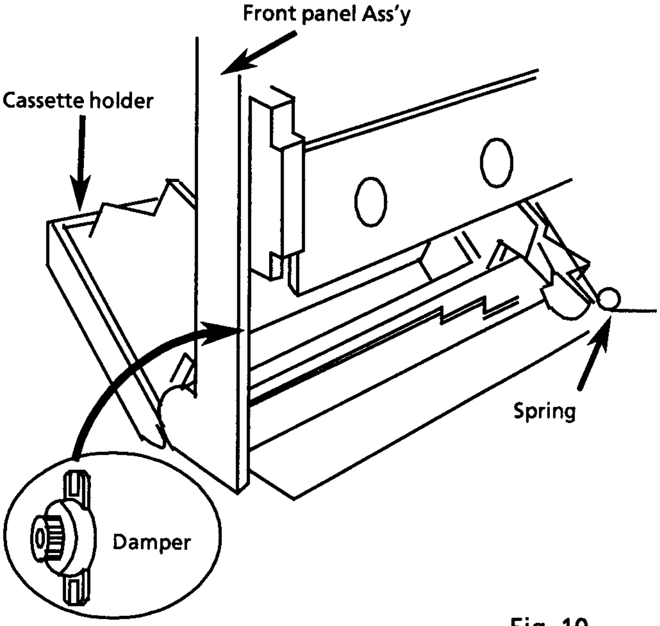

Front panel Ass'y
Cassette holder
Spring
Damper

Fig. 10

Cassette Mech. Ass'y removal

(13) Head assembly removal

1. Remove the Cassette mech. ass'y .
2. Remove the flexible wire from the cassette deck and remove the 3 screws ① holding the head ass'y.

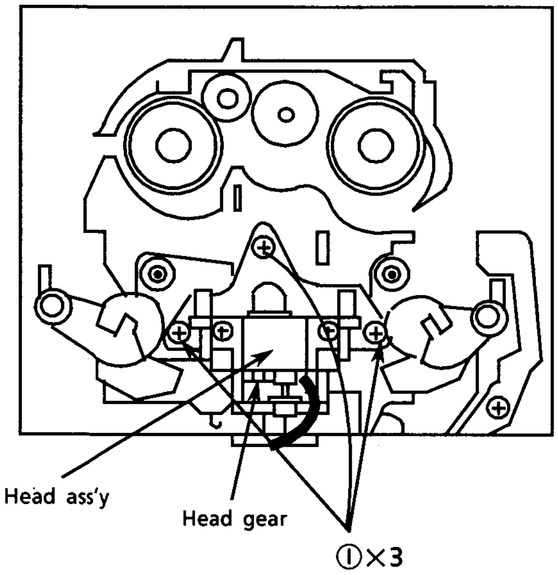

Head ass'y
Head gear
①×3

Fig.11 Cassette mechanism bottom view

(15) Pinch roller (FWD/REV) removal

1. Remove the cassette mech. assembly.
2. Remove the hook holding the pinch roller.
3. Remove the pinch roller ass'y.

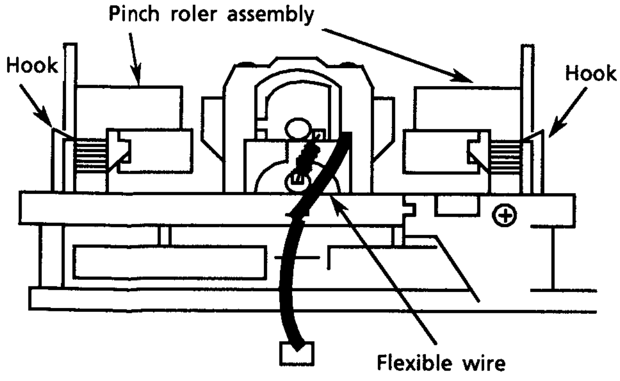

Pinch roler assembly
Hook
Hook
Flexible wire

Fig. 13 Cassette mechanism bottom view

(14) Head assembly

1. The direction of the head is changed with the direction lever .When servicing ,install the direction lever according to the direction of the head assembly .

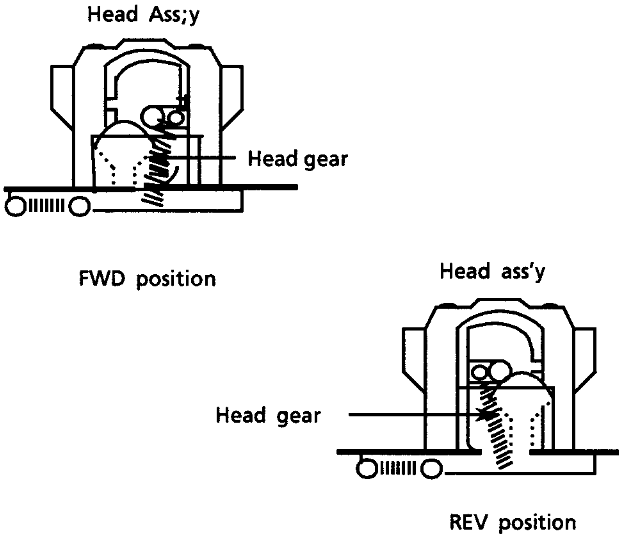

Head Ass;y
Head gear
FWD position
Head ass'y
Head gear
REV position

Fig.12-A Head ass'y side view

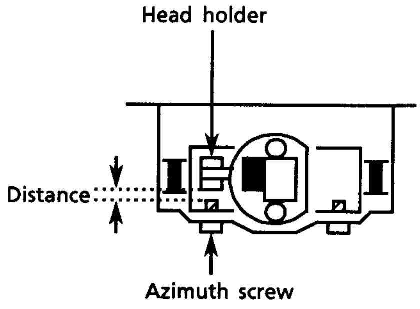

Head holder
Distance
Azimuth screw

Fig.12-B A distance of between head older and azimuth screw

① .. SDSF2608Z

(16) Capstan motor removal.

1. Remove the cassette mechanism.
2. Remove the cassette deck control PCB.
3. Remove the 6 screws Ⓙ holding the bracket.
4. Remove the hooks (■) of the bracket.
5. Put the cutting on the flywheel A together the bracket's pall as shown in fig. 16(Flywheel A) and check that the flywheel B is removed from the bracket's pall (fig. 16-Flywheel B).
6. Remove the capstan motor with the bracket.
7. Unsolder the broken flat wire of the capstan motor.
8. Remove the 2 screws fixing the motor and the bracket.

* To remove the bracket, it is easier to remove mech."B" first.
Vice versa, assembling mech."A" is easier for reassembly.

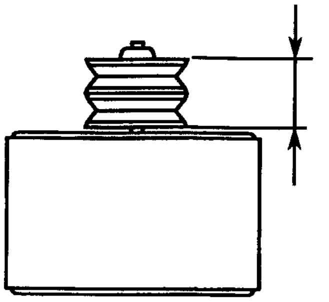


Fig. 14 Capstan motor pulley installation

(17) Flywheel removal

1. Remove the cassette mechanism assembly.
2. Remove the cassette amp PCB.
3. Remove the 6 screws Ⓙ and the bracket.
4. Remove the 4 hooks of the bracket.
5. Remove the bracket.
6. Remove the flywheels.

*The oil on the capstan must be wiped out after reassembling.

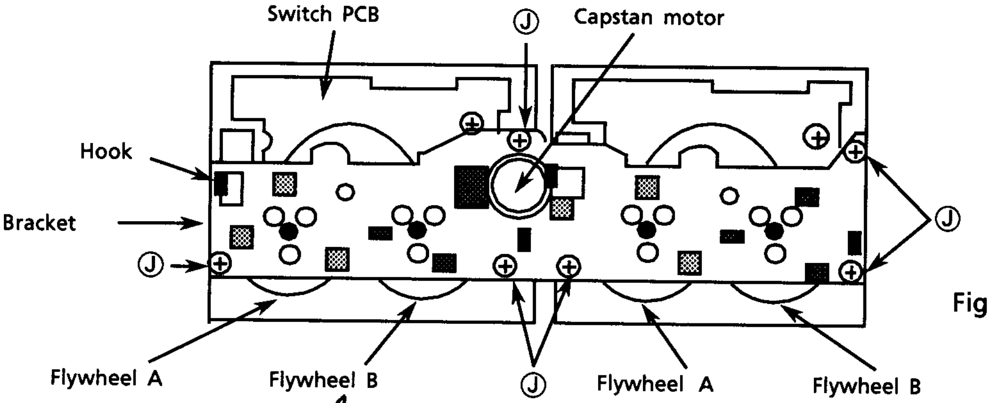
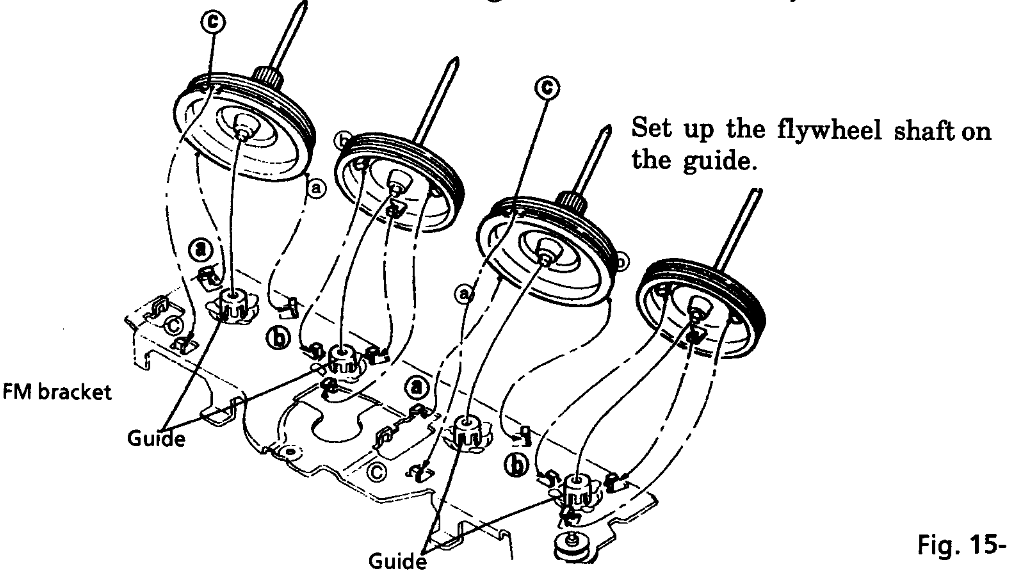

Switch PCB
Ⓙ
Capstan motor
Hook
Bracket
Ⓙ
Ⓙ
Flywheel A
Flywheel B
Ⓙ
Flywheel A
Flywheel B

Fig. 15-A


ⓒ
ⓑ
ⓐ
ⓐ
ⓒ
ⓑ
ⓒ
ⓐ
ⓑ
ⓐ
ⓒ
ⓑ
FM bracket
Guide
Guide

Set up the flywheel shaft on the guide.

Fig. 15-B

Ⓙ .. SDSF2608Z

(18) How to install the belts

1. Install the flywheels and belts as shown in the figure below. (Fig. 16)
   When putting the belts, put the long belt first.
2. Install the main reels to put the belts on the flywheels.

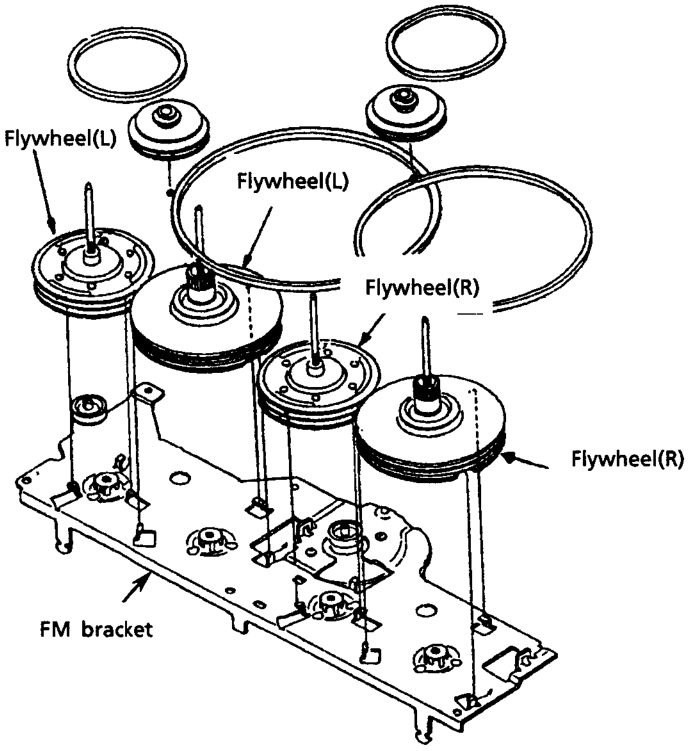

Flywheel(L)
Flywheel(L)
Flywheel(R)
Flywheel(R)
FM bracket

Fig. 16-A Install the Bracket and flywheels

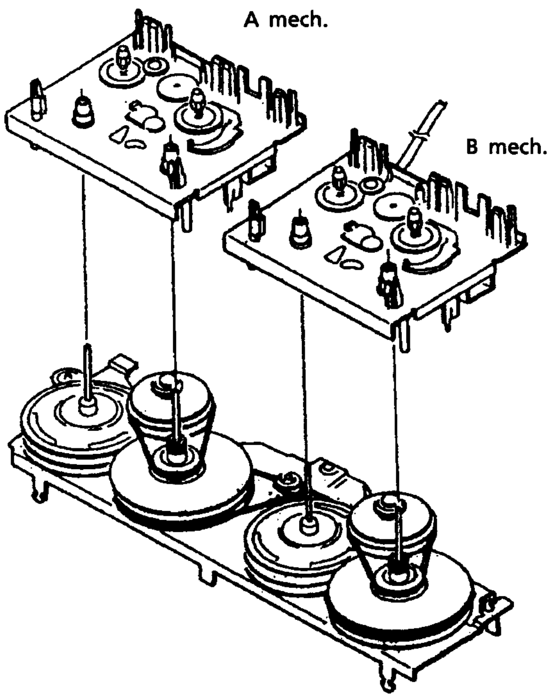
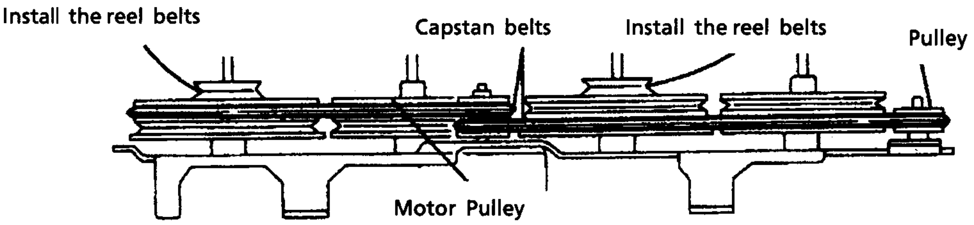
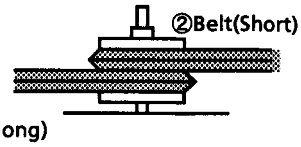

A mech.
B mech.

Fig. 16-C Install the cassette mech.


Install the reel belts
Capstan belts
Install the reel belts
Pulley
Motor Pulley

REEL BELTS → After hooking reel belts, no twist.


②Belt(Short)
①Belt (long)

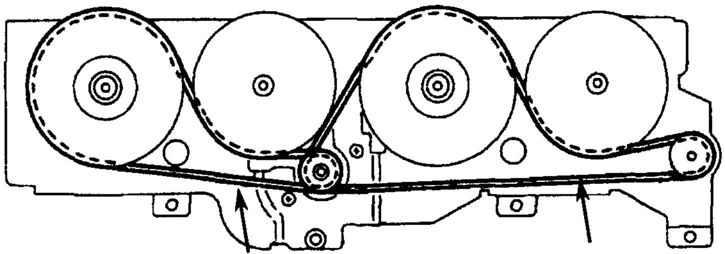
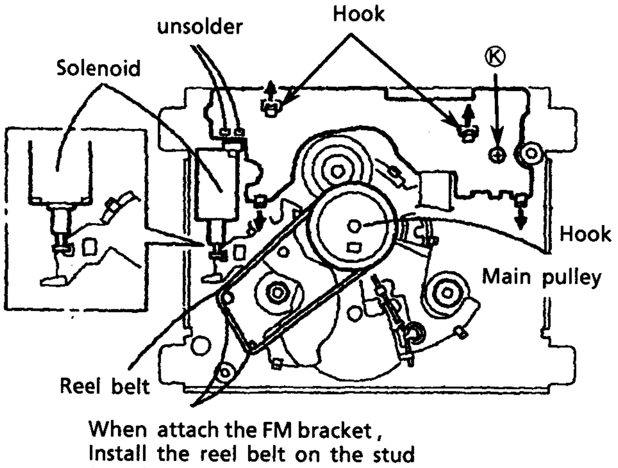

②Belt(Short)
①Belt (long)

Fig. 16-B Install the Belts

(19) Switch PCB removal

1. Remove the flywheel.
2. Remove the 1 screw Ⓚ .
3. Unsolder the broken solenoid.
4. Release the 4 hooks holding the Switch PCB.
5. Remove it.


unsolder
Hook
Solenoid
Ⓚ
Hook
Main pulley
Reel belt

When attach the FM bracket,
Install the reel belt on the stud
(See fig. 19)

Fig. 17

(20) Control cam removal

1. Remove the FM bracket and flywheel.
2. Pull out the main pulley .
3. Remove the trigger arm.
   While opening the two tabs ⓐ under the trigger arm, pull out the trigger arm from the shaft.
4. Pull out the elevator ring.
5. Remove the FWD/REV arm assembly.
   a. Remove the FWD/REV arm spring.
   b. While opening the four FWD/REV arm retaining tabs ⓑ outwards, pull out the FWD/REV arm.
6. Pull out the control cam.
   While pulling the shaft stopper section of the control cam in the central direction, pull out the control cam.

When attaching the control cam

While pressing the FWD/REV arm in the direction of the sorrow,pull the head the front.

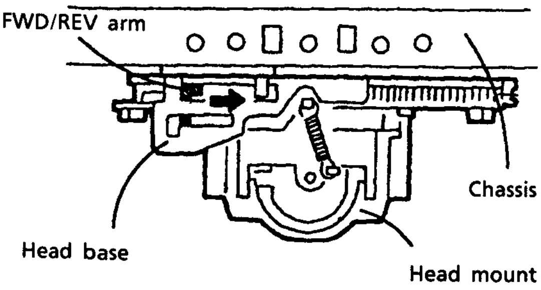
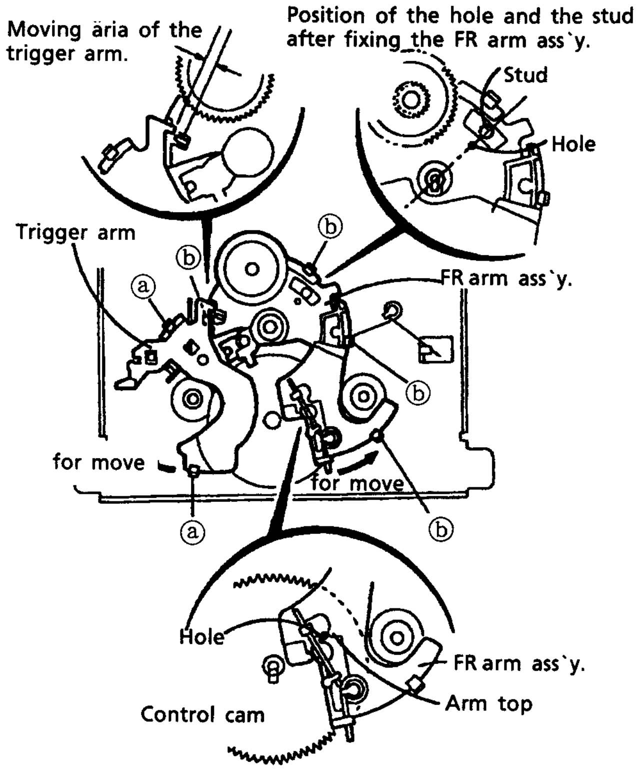

FWD/REV arm
Chassis
Head base
Head mount

Fig. 18-c


Moving äria of the trigger arm.
Position of the hole and the stud after fixing the FR arm ass'y.
Stud
Hole
Trigger arm
ⓑ
ⓑ
ⓐ
FR arm ass'y.
ⓑ
for move
for move
ⓐ
ⓑ
Hole
FR arm ass'y.
Arm top
Control cam

Position of the hole of cam and top of the arm after fixing the FR arm ass'y.

Fig. 18-a

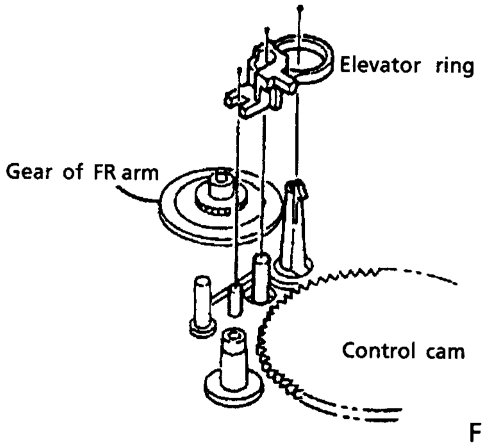

Elevator ring
Gear of FR arm
Control cam

Fig. 18-b

After preforming the procedure shown above, the studs under the control cam move as shown.

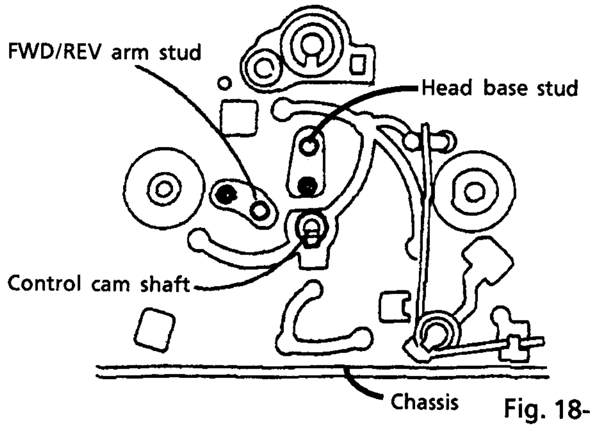

FWD/REV arm stud
Head base stud
Control cam shaft
Chassis

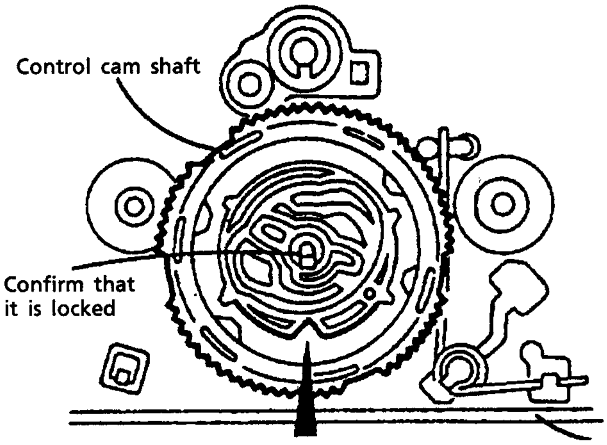
Fig. 18-d

Ⓚ .. SDST2612Z

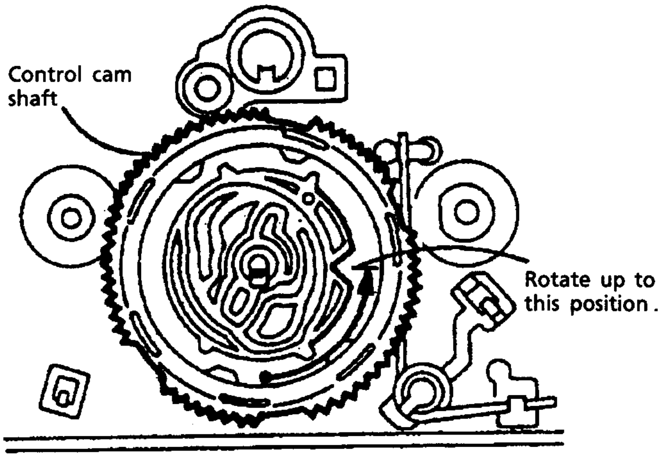
(21) How to assemble

1. Move the FWD/REV arm in the direction of the arrow.
2. In step 1, pull the head base forward.
3. In step 2, after inserting the cam into the shaft, move the head base and FWD/REV arm slightly until the cam is fully inserted and it clicks to inform when it has been locked.
4. Rotate the cam counterclockwise to check if the cam rotates smoothly and the spring clicks according to the forward/backward movement of the head base.
5. After checking the rotation of the cam, rotate the cam until the notch section comes to the right so that the FWD/REV arm assembly can be attached.
6. Attach the FWD/REV arm assembly while observing the positioning of:
   the hole and stud
   the cam hole and arm edge
   shown in the figure 18-a.
   After attachment, move the FWD/REV arm in the direction of the arrow to check if it moves back to the original position.
7. Attach the elevator ring.
8. Attach the trigger arm.
   After attachment, move the trigger arm in the direction of the arrow to check if it moves back to the original position.

Working confirmation:
If the control cam rotates counterclockwise, the assembly was successful: if it does not rotates. It must be reassembled.



Fit the control cam its notch located as shown. (Engage with the gear of the control cam while moving the FWD/REV arm and head base slightly.)



Attach the FWD/REV arm with the control cam rotated up to the position shown.

CD Changer mech. Ass'y removal

(22) CD Tray assembly removal

1. Disassemble the changer mech..
2. Remove the screw Ⓛ holding the stopper bracket.(See Fig.19) ---- (U.S.A and CANADA only)
3. Remove the rod from both ends' hooks which are secured on T.Bracket ⓐ and clamper baseⓑ. [See Fig. 19)
4. Remove 3 screwsⓁ securing T.Bracket.(See Fig. 21.)
5. Remove a screw Ⓝsecuring center of the clamper ass'y. (See Fig. 20)
6. Remove the clamper ass'y from ★ screw fixing side.
7. Remove a screw Ⓛwhich secures the return spring and lock levers from the chassis ass'y.(See Fig. 22.)
8. Remove 2 pallsⓓ which slightly secure the return spring to remove it.
9. Remove 3 lock levers.
10. Check that the lifter unit stopper is inserted into hole ⓔ located on CD tray ass'y. (See Fig. 23.)
11. Check that the driver unit elevator is seen from a hole (marked ⑤) on left side of the CD changer mech..(See Fig. 24 and 25.)
    [NOTE] Set the elevator in correct position (Fig. 25) by rotating the pulley gear with finger if it is not positioned correctly (Fig. 26.).
12. Rotate the motor pulley clockwise with finger until the lifter unit's stopper is lowered from ⓔhole located on the CD tray ass'y. (See Fig. 26.)
13. And, pull all 3 CD tray assemblies forward until they stop. (See Fig. 24.)
14. Press 2 pawls (f, f') located rear side of the CD tray ass'y according to an arrowⓗ to remove the CD tray ass'y. (See Fig. 27.)
    At first, removing the lowest tray is easier.

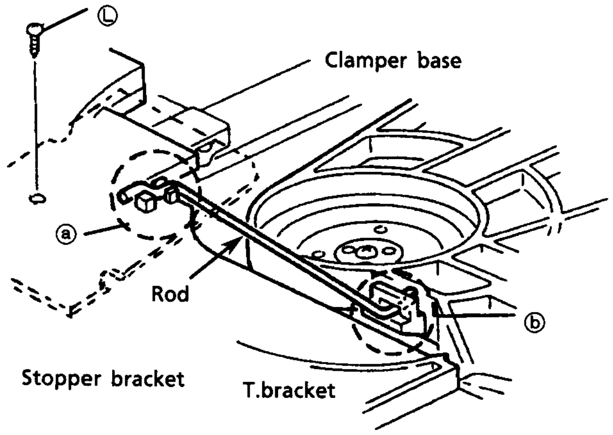


Fig. 19

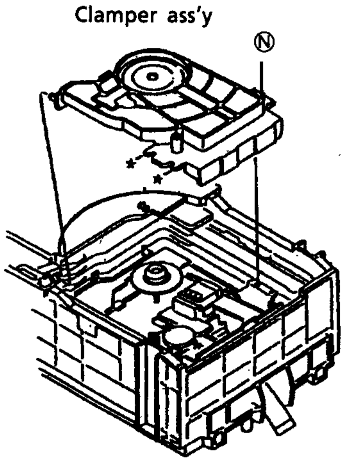


Fig.20

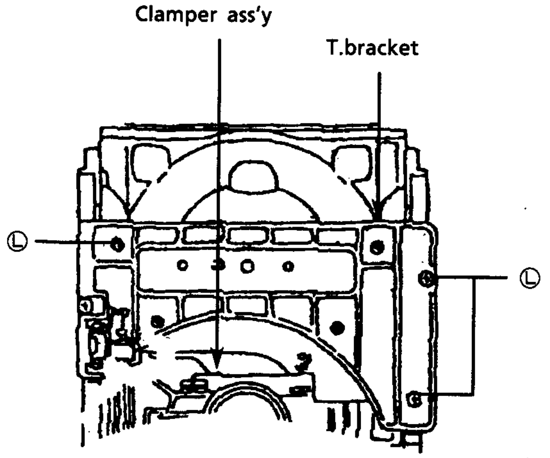


Fig.21

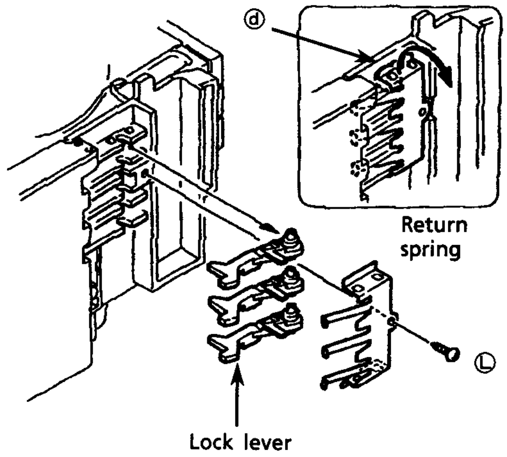


Fig.22

Ⓛ .. SBSF2608Z Ⓝ ... SPST2606Z

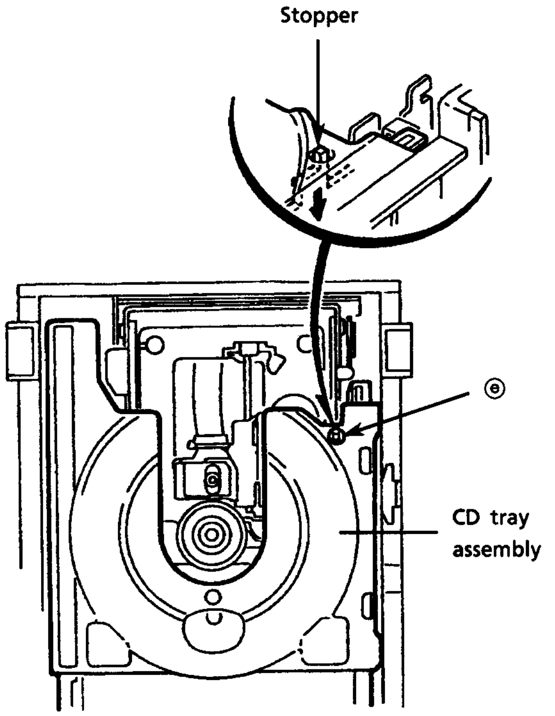

Stopper
ⓔ
CD tray assembly

Fig. 23

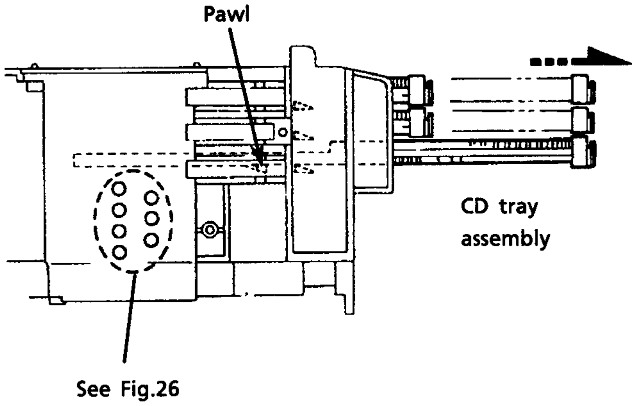

Pawl
CD tray assembly
See Fig.26

Fig. 24

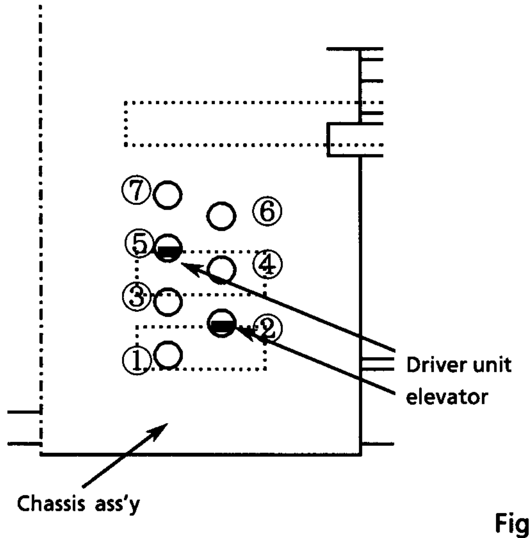

⑦
⑥
⑤
④
③
②
①
Driver unit elevator
Chassis ass'y

Fig. 25

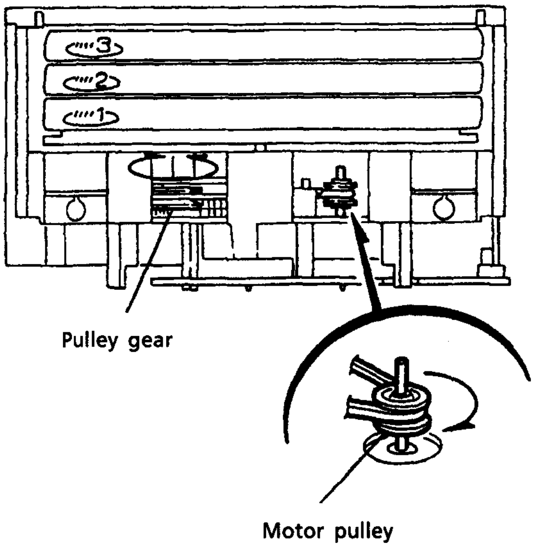

3
2
1
Pulley gear
Motor pulley

Fig. 26

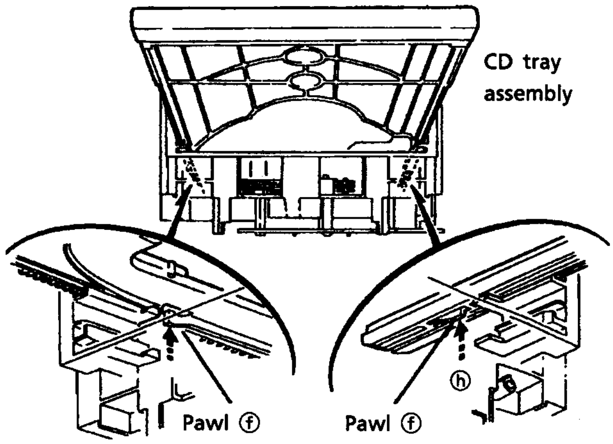

CD tray assembly
Pawl ⓕ
Pawl ⓕ
ⓗ

Fig. 27

Ⓛ .. SBSF2608Z

(23) CD mechanism removal

1. Remove the CD tray ass,y .
2. Rotate the Cam R1, R2 ass'y counterclockwise so that CD mech. ass'y's shaft ⓗ is positioned as shown in Fig. 28.
3. Remove 4 screws Ⓛ securing CD mech. ass'y. (See Fig. 28.)

*How to replace pick-up unit

1. If CD mech. is removed without disassembling CD mech. ass'y, rotate the Cam R1, R2 ass'y clockwise to set the CD mech. ass'y's shaft(L) as shown in Fig. 29.
2. Lift the CD mech. ass'y toward the direction ⓘ to remove it from the lifter unit. (See Fig. 30.)

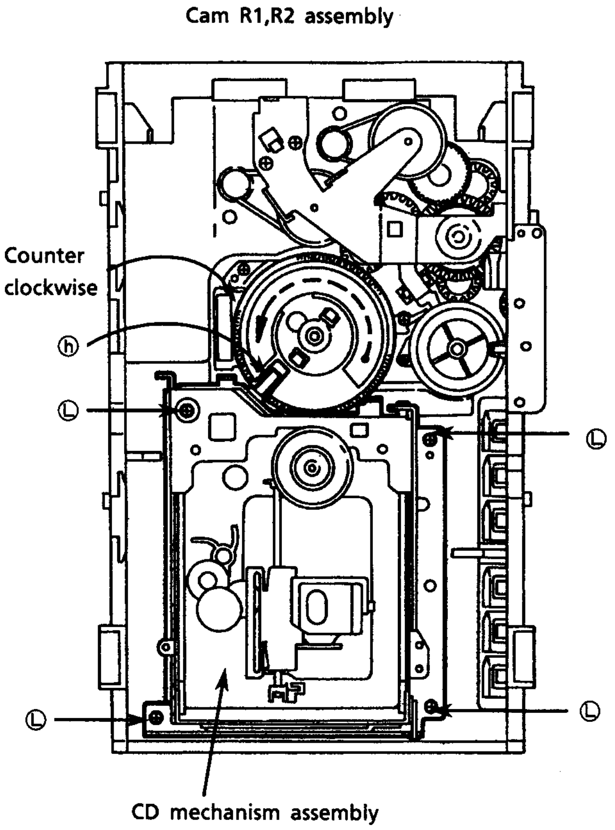

Cam R1,R2 assembly
Counter clockwise
ⓗ
Ⓛ
Ⓛ
Ⓛ
Ⓛ
CD mechanism assembly

Fig. 28

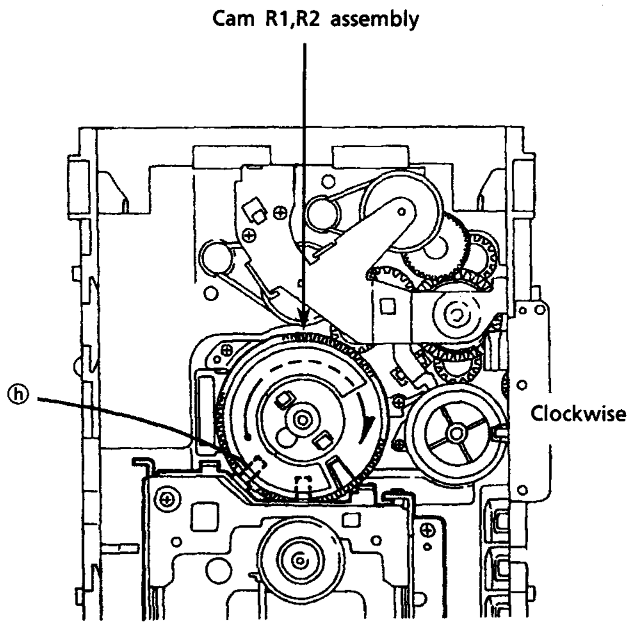

Cam R1,R2 assembly
ⓗ
Clockwise

Fig. 29

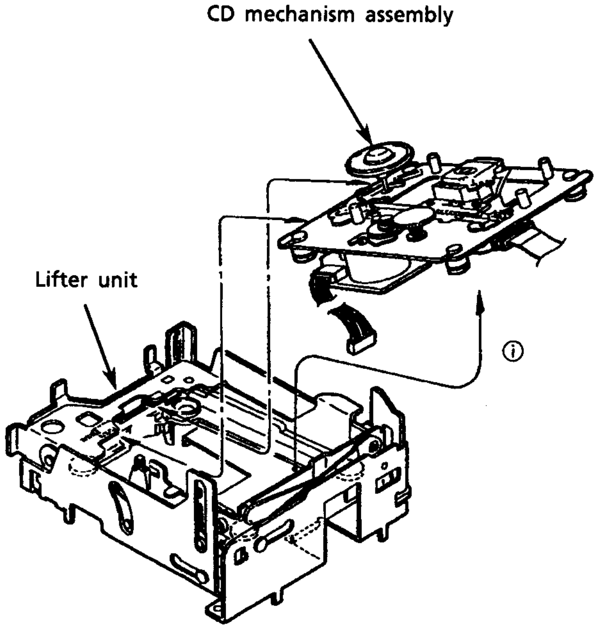

CD mechanism assembly
Lifter unit
ⓘ

Fig. 30

Ⓛ .. SBSF2608Z

(24) Actuator motor board removal

1. Unsolder 4 soldered point ⓙ for both motors. (See Fig. 31.)
2. Remove a screw Ⓗ securing the CD servo board. (See Fig. 31.)
3. Press the hook and release it to remove the CD servo board.
4. Remove 2 screws Ⓕsecuring the actuator motor board. (See Fig. 31.)
5. Remove 2 screws Ⓛsecuring the tray select switch board. (See Fig. 32.)

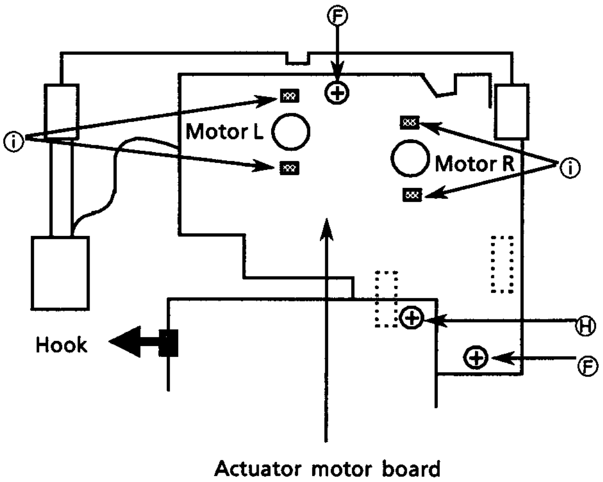

Ⓕ
ⓘ
Motor L
Motor R
ⓘ
Ⓗ
Hook
Ⓕ
Actuator motor board

Fig. 31

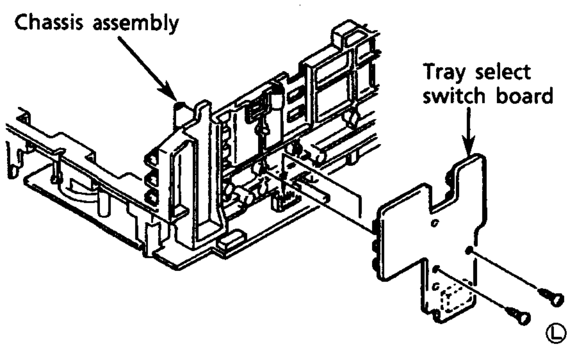

Chassis assembly
Tray select switch board
Ⓛ

Fig. 32

(25) Cam unit removal

1. Disassemble CD mech. ass'y.
2. Rotate the Cam gear L so that the drive unit's pole ⓚ is positioned as shown in Fig. 34.
3. Remove the drive unit and cylinder gear. (See Fig.35.)
4. Rotate the Cam gear L so that the select gear's ⓘ is positioned as shown in Fig.36.
5. Remove 4 screws Ⓕ securing the cam unit which includes the cam gear L and Cam R1, R2 ass'y. (See Fig 36.)

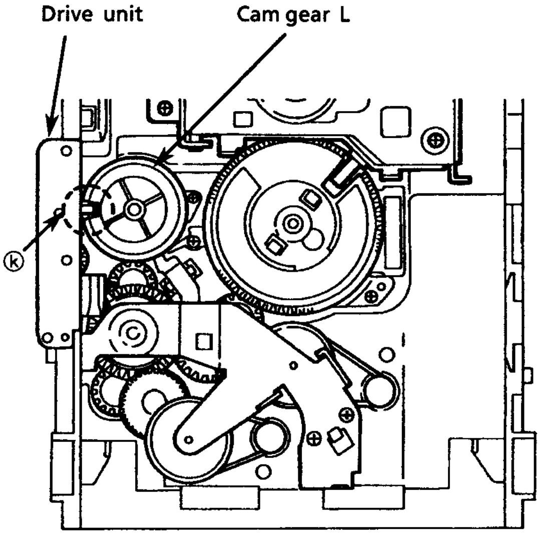

Drive unit
Cam gear L
ⓚ

Fig. 33

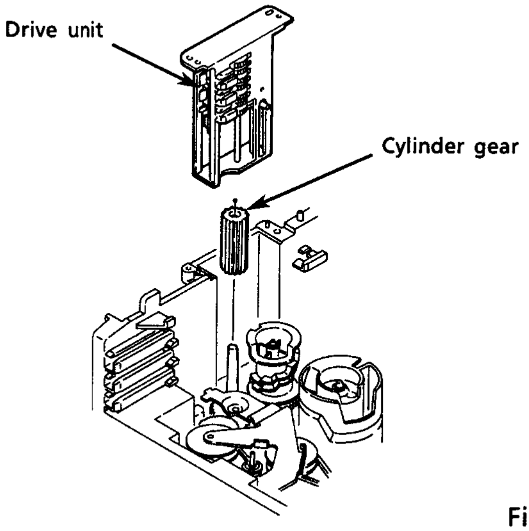

Drive unit
Cylinder gear

Fig. 34

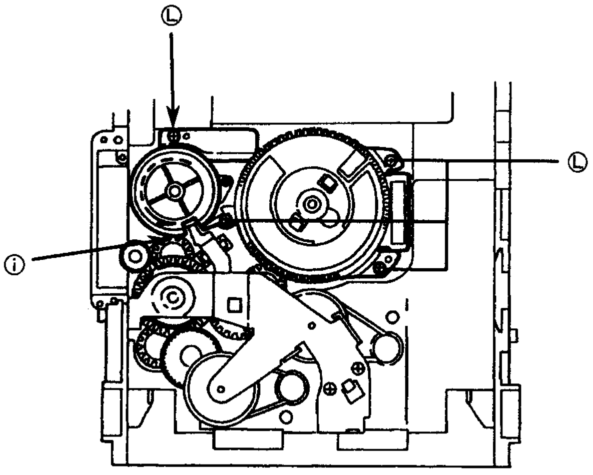


Fig. 35

Ⓕ .. SBSF2608Z Ⓗ ... SBSF3008Z

(26) Removal for actuator motor and belt

1. Remove 2 screws Ⓟ securing the gear bracket. (See Fig. 36.)
2. Press the pawl Ⓜ securing the gear bracket to the arrow in the figure to remove the gear bracket. (See Fig. 36.)
3. Remove the gear bracket from the chassis ass'y's ⓝ securing top of the gear bracket. (See Fig. 37.)
4. Remove each belts from the both actuator motor pulleys and the pulley gears. (See Fig.36.)
5. Reverse the chassis ass'y and widen 4 poles ⓞ which secure both actuator motors to its arrows to remove the actuator motors. (See Fig.38 .)

[NOTE] The pulley gears and other gears which consist the gear unit may drop separately if the chassis ass'y is reversed without gear bracket and belt. See Fig. 39 to assemble them again.

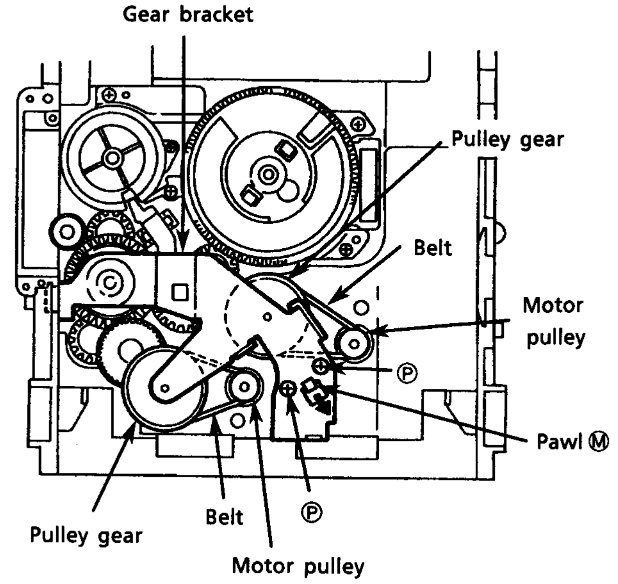

Gear bracket
Pulley gear
Belt
Motor pulley
Ⓟ
Pawl Ⓜ
Pulley gear
Belt
Ⓟ
Motor pulley

Fig. 36

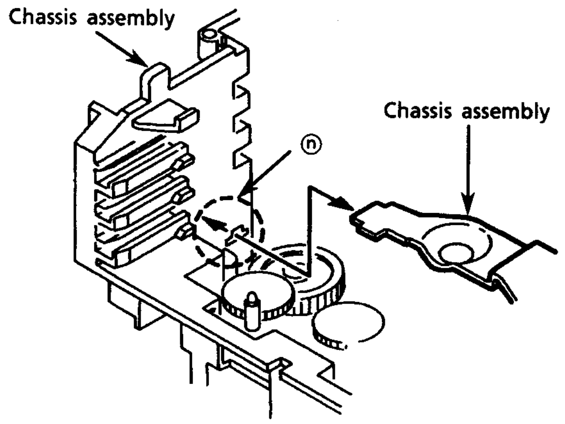

Chassis assembly
ⓝ
Chassis assembly

Fig. 37

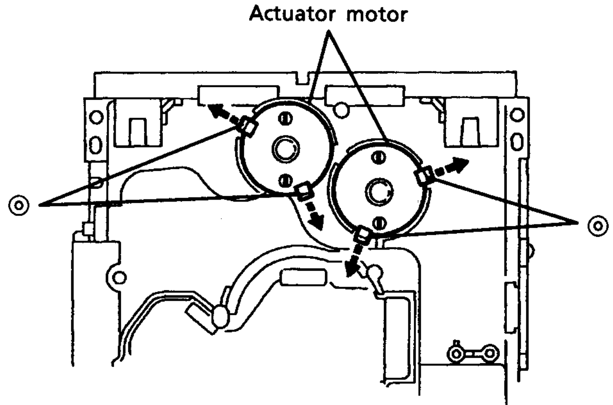

Actuator motor
ⓞ
ⓞ

Fig. 38

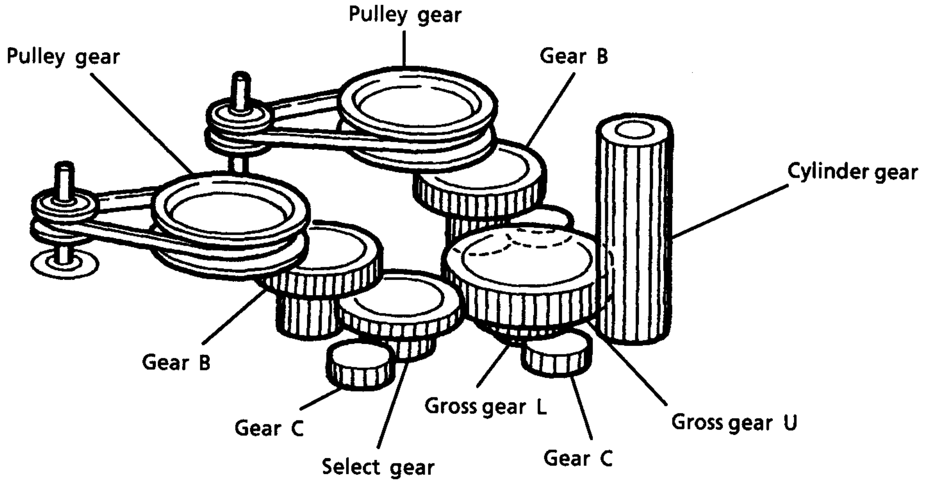

Pulley gear
Pulley gear
Gear B
Cylinder gear
Gear B
Gear C
Gross gear L
Gross gear U
Select gear
Gear C

Fig. 39

Ⓘ .. DPSP2616Z

(27) Removal of cam R1, R2 ass'y and cam gear L

1. Remove the slit washer securing Cam R1, R2 ass'y.
   (See Fig. 40.)
2. Remove 2 poles Ⓟ securing Cam R1 to remove Cam R2 from Cam R1.
3. Remove the slit washer securing Cam gear L.
4. Remove Cam gear L from the C.G. base ass'y.

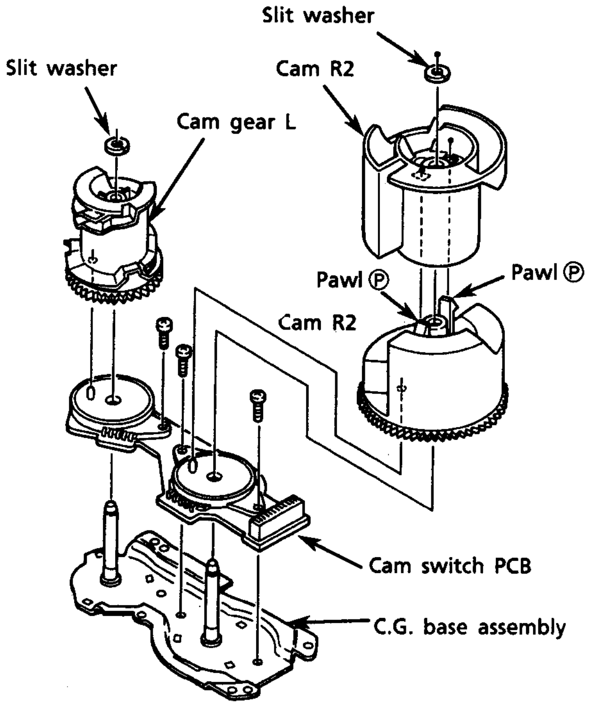

Slit washer
Slit washer
Cam R2
Cam gear L
Pawl Ⓟ
Pawl Ⓟ
Cam R2
Cam switch PCB
C.G. base assembly

Fig. 40

(28) Removal of C.G. base ass'y

Remove 3 screws Ⓠ securing the C.G. base ass'y. (See Fig. 40 and 41.)

[NOTE] Set the drive unit's pawl Ⓡ so that it is positioned as shown in Fig. 41.
Confirm that the cam gear L engages with the gear unit by rotating the cam gear L.

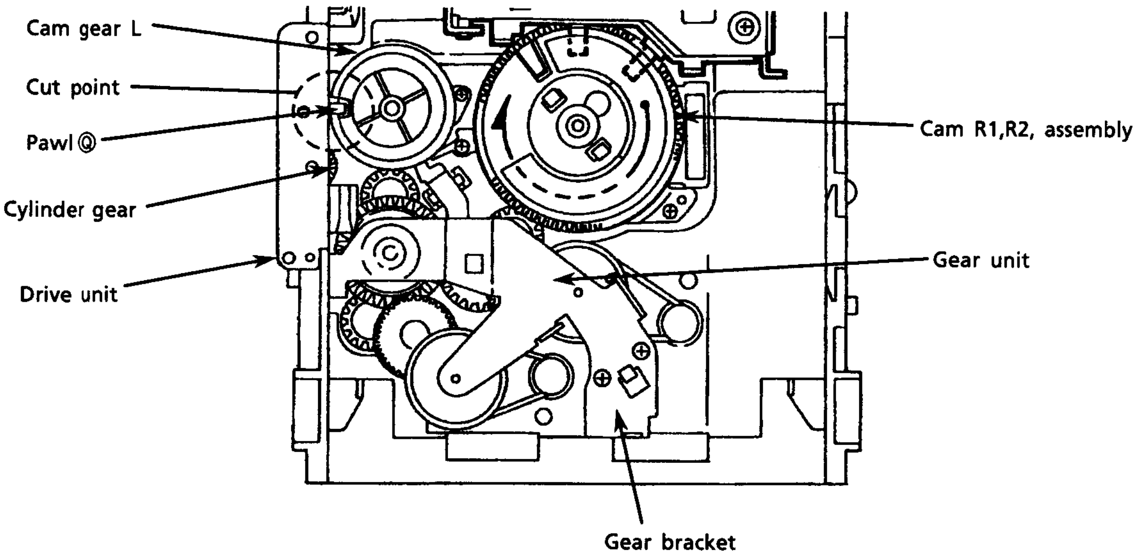

Cam gear L
Cut point
Pawl Ⓠ
Cylinder gear
Drive unit
Cam R1,R2, assembly
Gear unit
Gear bracket

Fig. 41

Ⓠ .. SPST2606Z

(29) Removing the Pickup

1. Remove the CD mech. assembly.
2. Release the shaft to remove the pickup.

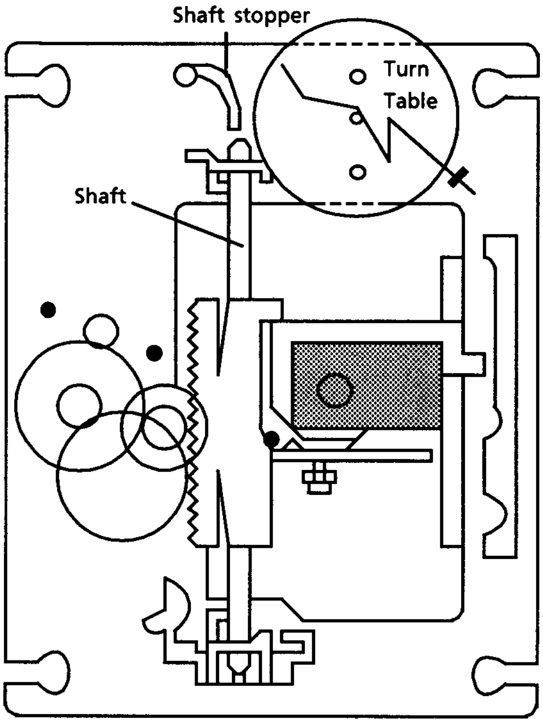


Fig. 42

(30) Spindle motor installation

1. Tighten the 2 screws to the same torque.
2. Fasten the spindle and feed motor P.C. board with the screw and solder.
3. Install the turntable. When installing, press straight down at the center of the turntable until the distance from the surface of the mech. base to the turntable is exactly 19.4±0.1mm.

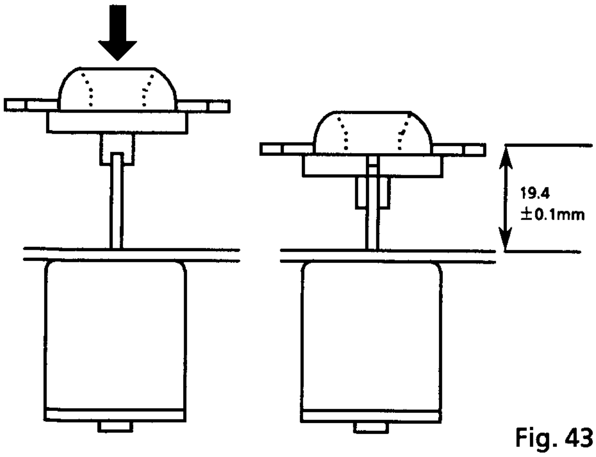


Fig. 43

(31) Removing the Spindle motor

1. Remove the CD mech. assembly.
2. Remove the turntable, and remove the 2 screws ⊗ retaining the spindle motor.
3. Remove the screw retaining the spindle and feed motor circuit board and unsolder it.

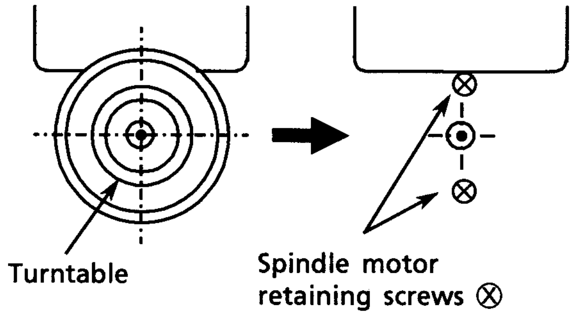


Fig. 44

(32)

After inserting the turntable, bond the motor shaft and turntable together (at the section marked by an arrow in fig 46 on the left below).

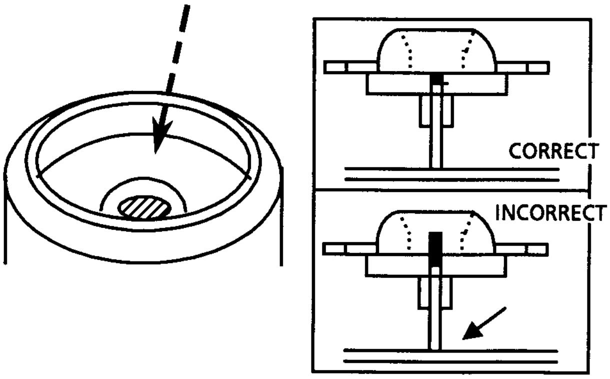


Fig. 45

(33)

Use "LOCKTITE" #460 bonding agent, and apply as little as possible.

Take care not to allow any excess bonding agent to get onto the turntable.

Be extremely careful not to allow bonding agent to adhere to the motor bearing (the section marked by an allow in fig. 45 on the right).

⊗ .. SDSP2003N

Adjustment procedures

■ Tuner section

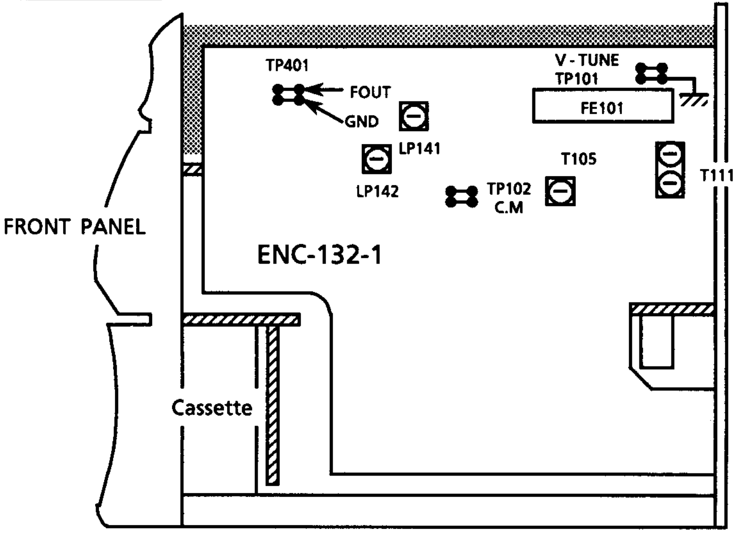
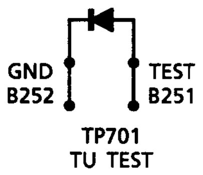


Fig.1

Clock Adjustment

1. After connecting B251 and B252 with some wire as shown in the figure below, connect the AC power cord into an AC outlet.
2. Confirm that the display is off and remove the wire.
3. Connect a frequency counter to TP401 B178 and B179.
4. Confirm the frequency 50000±0.29Hz.



ENB-235-1(Front PCB)

(1) Tuning voltage

Confirm the voltages at TP101 is within the standard values shown in the table below. If the voltages are not satisfied, replace T111 for MW and for LW or FE101 for FM.

FM Tuning voltage (Unit : V)

Area	Frequency			
	64.0MHz	74.0MHz	87.5MHz	108MHz
East Europe	1.8±1.0 (V)	1.8±1.0 (V)	9~10.5(V)	9~10.5(V)
the U.K., Continental Europe, U.S.A., Canada, Australia, Universal	—	—	1.6±1.0 (V)	8.0±2.0 (V)

AM Tuning voltage (Unit : V)

Area	Frequency (MW)							Frequency (LW)	
	522KHz	530KHz	531KHz	1600KHz	1602KHz	1629KHz	1710KHz	144kHz	288kHz
BS,EF,EN,G,GI,VX	>0.7	—	—	—	—	<8.3	—	0.5<	>7.5
C,J	—	>0.8	—	—	—	—	<8.8	—	—
U,UT,UB,UP,US(Channel Space 9kHz)	—	—	>0.8	—	<7.9	—	—	—	—
Universal(Channel Space 10kHz)	—	>0.8	—	<7.9	—	—	—	—	—
A	>0.7	—	—	—	—	<8.3	—	—	—

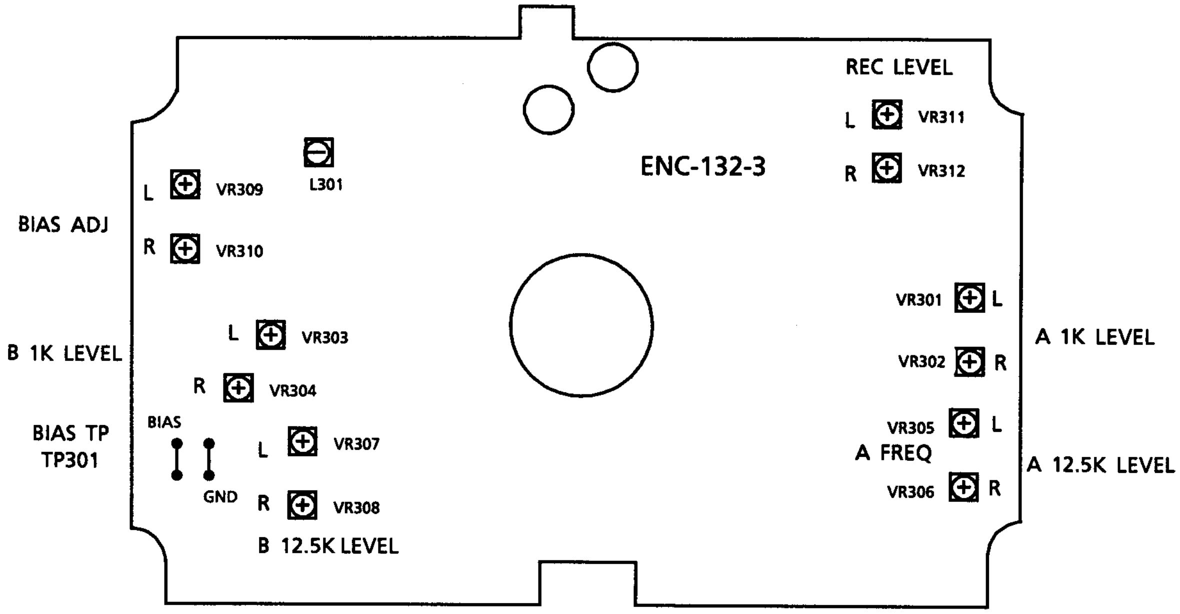
(2) FM center meter

Receive a broadcast which understanding the frequency by using the function of 'MANUAL SEARCH'. Adjust T105 (detector coil) so that the voltage at TP102 becomes 0±1.5mV.

The Marks for Designated Areas

J	the U.S.A.	A	Australia	C	Canada	VX	East Europe
G	Germany	U	Universal	US	Singapore	UT	Taiwan
EF	Continental Europe	EN	Scandinavia	GI	Italy	BS	the U.K.
UB	Hong Kong	UP	Korea	No mark indicates all area.			

■ Deck Adjiust point


REC LEVEL
L VR311
R VR312
ENC-132-3
L VR309
L301
BIAS ADJ
R VR310
VR301 L
A 1K LEVEL
VR302 R
L VR303
B 1K LEVEL
R VR304
BIAS TP
TP301
BIAS
GND
L VR307
R VR308
B 12.5K LEVEL
VR305 L
A FREQ
VR306 R
A 12.5K LEVEL

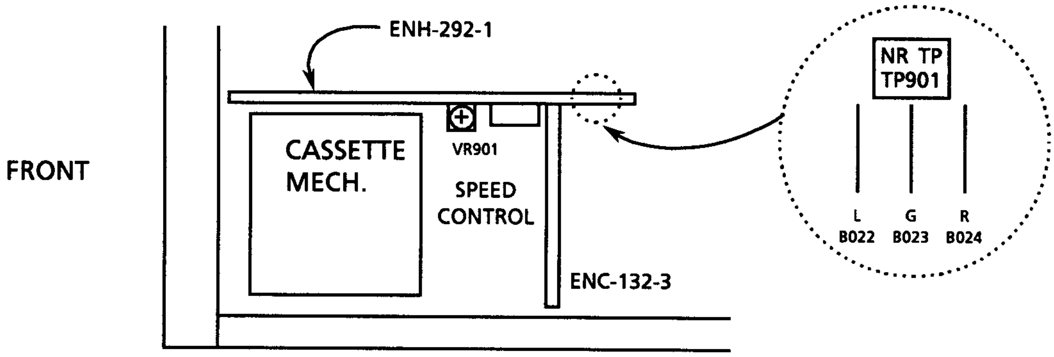

ENH-292-1
FRONT
CASSETTE MECH.
VR901
SPEED CONTROL
ENC-132-3
NR TP
TP901
L
G
R
B022
B023
B024

Fig.2

Deck section

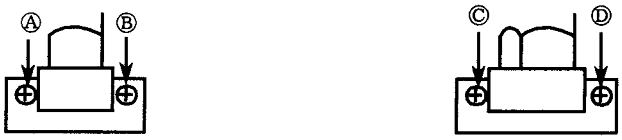
1. Measuring instruments

Audio frequency signal generator (0dbs output at the 600 ohm output terminal from 50Hz to 20KHz)
Electronic voltmeter
Frequency counter
Wow & Flutter meter
Distortion Meter with band pass filter
Attenuator (600 ohm impedance)
A resistor with 600Ω

Tape No.	Frequency	Level (Wow & Flutter)	Purpose
VTT-703L	10kHz	−10dBs	Head azimuth , Frequency Response
VTT-712	3000Hz	0dBs 0.025%WRMS	Tape Speed , Wow & Flutter
VTT-724	1kHz	−4dBs	Standard Level
TMT-6447	—	—	Blank Skip
TMT-6247 , TMT-6237	—	—	Music Scan
TMT-7088S	—	—	Recording standard Normal : UR
AC-712	—	—	Recording standard METAL :MA
AC-513	—	—	Recording standard CrO_2 : SA
TW-2111, TW-2121	—	—	Forward / reverse play torque measuring
TW-2231	—	—	Feed forward / rewind torque measuring
C-120 Tape	—	—	Confirming the tape running

2.Adjustment and repairing the mechanism

Item	Adjustment method	Standard value	Remarks
Head azimuth	Deck A 1. Connect an electronic voltmeter to the NR TP901(figure 1) to playback VTT-703L. 2. Adjust screw Ⓐ so that the indication of the voltmeter becomes maximum when PLAY (▶) is pressed. 3. Adjust screw Ⓑ so that the indication of the voltmeter becomes maximum when PLAY (◀) is pressed. Deck B 4. Adjust screw Ⓒ so that the indication of the voltmeter becomes maximum when PLAY (▶) is pressed. 5. Adjust screw Ⓓ so that the indication of the voltmeter becomes maximum when PLAY (◀) is pressed. 6. After making the adjustment,apply screw lock to prevent screws Ⓐ, Ⓑ, Ⓒ and Ⓓ coming loose.	Maximum	1. **Refer to figure 3.** 2. When the specified characteristic cannot be obtained because of head wear, excessive magnetization, etc., replace the head assembly and adjust the head azimuth. Also, perform the electric adjustment. 3. When there is the difference of more than 3 ~ 4 dB between left and right output levels, replace the head assembly to avoid complaints.
Playback torque	1. Measure the torque in the playback mode by the torque meter.	26 ~ 72 g-cm	When the standard torque cannot be obtained, replace the FR arm assembly or motor.
Fast forward torque	1. Measure the torque in the fast forward mode by the torque meter.	75 ~ 175 g-cm	When the standard torque cannot be obtained,replace the FR arm assembly or motor.
Rewind torque	1. Measure the torque in the rewind mode by the torque meter.	75~ 175 g-cm	When the standard torque cannot be obtained, replace the FR arm assembly or motor.
Wow & flutter	1. Connect the wow & flutter meter to the DOLBY TP(figure 1) and play back VTT-712. 2. Its reading should be within 0.25% (WTD).	Less than 0.25%	As a complaint may occur if the wow & flutter fluctuates by 0.1% even though it is allowed in the standard, repairing is required.



Deck A

Deck B

Fig.3

3. Electrical Adjustments (Make the following adjustments after adjusting the head azimuth.)

In principle, the adjustments should be made in the following sequence.
Set the NR switch to OFF and the BEAT CUT switch to "1".
Adjustments marked with an asterisk (*) should always be made after the head is replaced

0dBs=0.775V

Item	Adjustment Method	Adjustment Location	Standard Value	Remarks
Tape Speed	1. Connect a frequency counter to the NR TP 901 (figure 1) and play back VTT-712. 2. Adjust the semi-fixed resistor VR935 on FMH-005 - 1 (figure 1).	VR935	3,000 Hz ±10Hz	Connect a wow & flutter meter with a built-in frequency counter to the speaker terminals.
Standard level (Playback Level)	1. Connect an electronic voltmeter to the NR TP901(figure 1). Play back VTT-724 (1 kHz : −4dBs) to adjust the semi-fixed resistors.	**Deck A** L: VR301 R: VR302 **Deck B** L: VR303 R: VR304	488mV (−4dBs)	1) The playback level varies when the head is replaced so should be adjusted. Use an electronic voltmeter with an impedance of 100 kΩ or more.
Playback Frequency Response	1. Connect an electronic voltmeter to the NR TP 901(figure 1). 2. Play VTT-703L (10kHz : −10dBs) and adjust semi-fixed resistors to obtain the standard values.	**Deck A** L: VR305 R: VR306 **Deck B** L: VR307 R: VR308	245mV (−10dBs)	—
Recording Bias Frequency	1. Connect a frequency counter to the BIAS TP(figure 1), and perform a recording to adjust bias frequency.	L301	105 kHz ±5 kHz	Set the BEAT CUT SWITCH to "1". (BS,EF,EN,G,GI,VX only)
Record / Play Frequency Response (Bias current)	1. Supply 1kHz and 12.5kHz with 30mV signals to AUX terminals respectively to record them. 2. Connect an electronic voltmeter to the NR TP901 (figure 1) to confirm the recorded values. 3. If the values are not satisfied, adjust the semi-fixed resistors and record the signal again to confirm the recorded values.	L : VR309 R : VR310	0±2 dB with 1 kHz as the standard.	**Refer to figure 4 below.** 1) The recording and playback frequency response of a cassette deck are adjusted by adjusting the bias. 2) Perform the adjustment with normal tape and confirm that the values are within the range for metal tape.

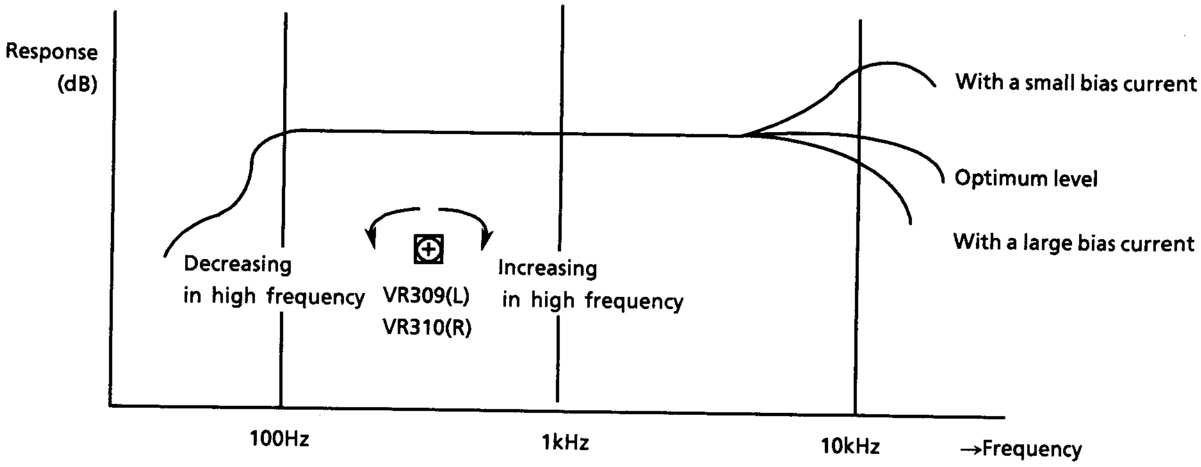


Fig.4

Flow of Functional Operation Until TOC is Read

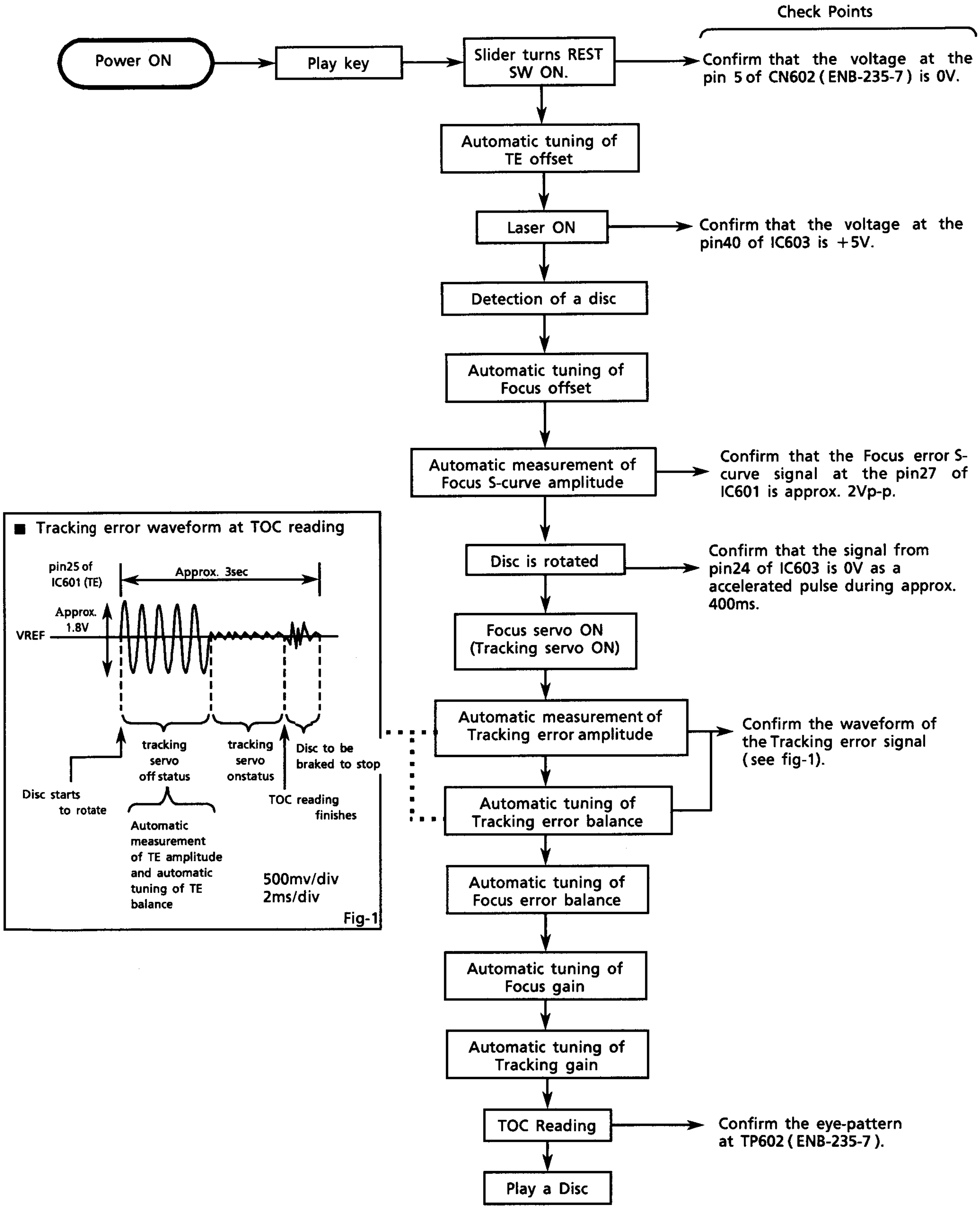

Check Points
Power ON
Play key
Slider turns REST SW ON.
Confirm that the voltage at the pin 5 of CN602 (ENB-235-7) is 0V.
Automatic tuning of TE offset
Laser ON
Confirm that the voltage at the pin40 of IC603 is +5V.
Detection of a disc
Automatic tuning of Focus offset
Automatic measurement of Focus S-curve amplitude
Confirm that the Focus error S-curve signal at the pin27 of IC601 is approx. 2Vp-p.
Disc is rotated
Confirm that the signal from pin24 of IC603 is 0V as a accelerated pulse during approx. 400ms.
Focus servo ON (Tracking servo ON)
Automatic measurement of Tracking error amplitude
Confirm the waveform of the Tracking error signal (see fig-1).
Automatic tuning of Tracking error balance
Automatic tuning of Focus error balance
Automatic tuning of Focus gain
Automatic tuning of Tracking gain
TOC Reading
Confirm the eye-pattern at TP602 (ENB-235-7).
Play a Disc
■ Tracking error waveform at TOC reading
pin25 of IC601 (TE)
Approx. 3sec
Approx. 1.8V
VREF
tracking servo off status
tracking servo onstatus
Disc to be braked to stop
Disc starts to rotate
TOC reading finishes
Automatic measurement of TE amplitude and automatic tuning of TE balance
500mv/div
2ms/div

Fig-1

Maintenance of Laser Pickup

(1) Cleaning the pick up lens

Before you replace the pick up, please try to clean the lens with a alcohol soaked cotton swab.

(2) Life of the laser diode (Fig.1)

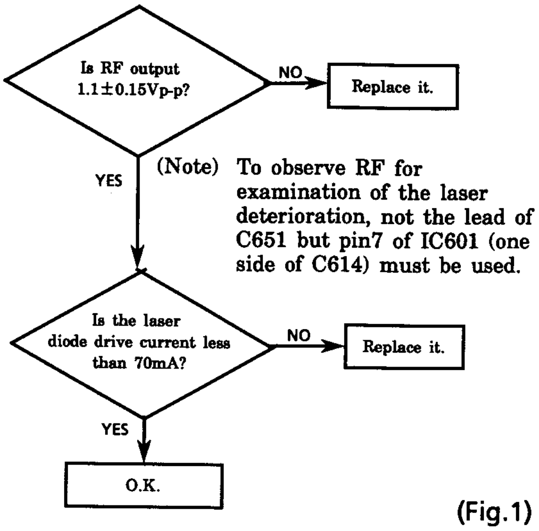
When the life of the laser diode has expired, the following symptoms will appear.

1. The level of RF output (EFM output: amplitude of eye pattern) will be low.
2. The drive current required by the laser diode will be increased. In such a case, check the life of the laser diode following the flowchart below.

(3) Measurement of laser diode drive current

Cut the jump wire (B201) and add a 1Ω resistor. (ENB-235-7)

Measure the voltage across the resistor (1Ω) with a milli-voltmeter. When the voltage is more than 70mV, it shows that the life of the laser diode has expired.


Is RF output 1.1±0.15Vp-p?
NO
Replace it.
YES
Is the laser diode drive current less than 70mA?
NO
Replace it.
YES
O.K.

(Note) To observe RF for examination of the laser deterioration, not the lead of C651 but pin7 of IC601 (one side of C614) must be used.

(Fig.1)

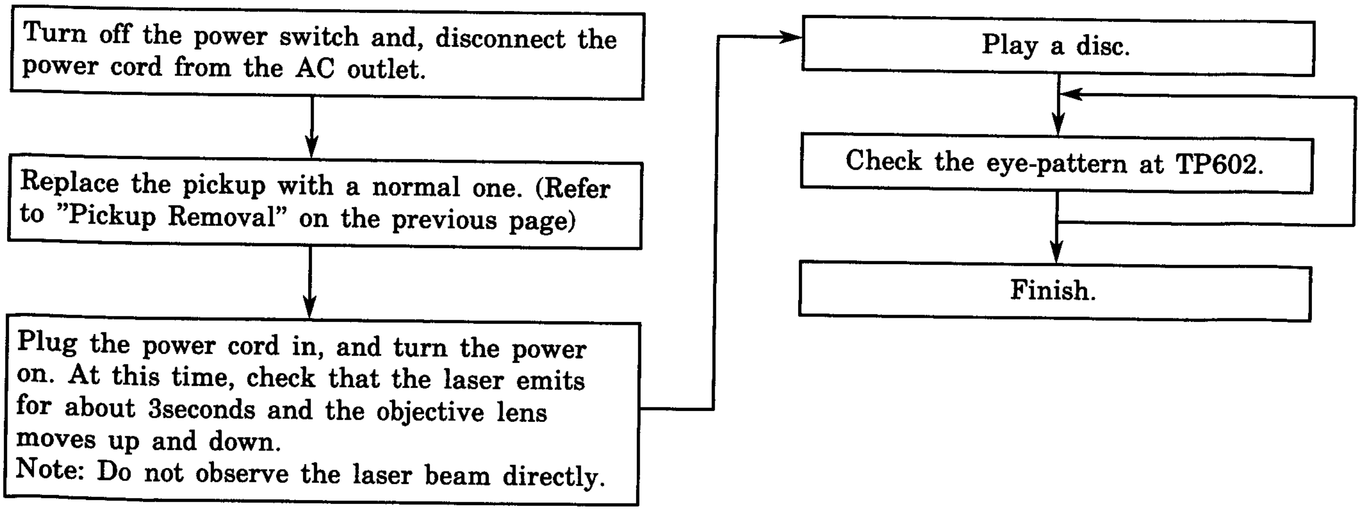
(4) Semi-fixed resistor on the APC PC board

The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power. Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor.

If the laser power is lower than the specified value, the laser diode is almost worn out, and the laser pickup should be replaced.

If the semi-fixed resistor is adjusted while the pickup is functioning normally, the laser pickup may be damaged due to excessive current.

Replacement of Laser Pickup



Turn off the power switch and, disconnect the power cord from the AC outlet.

Replace the pickup with a normal one. (Refer to "Pickup Removal" on the previous page)

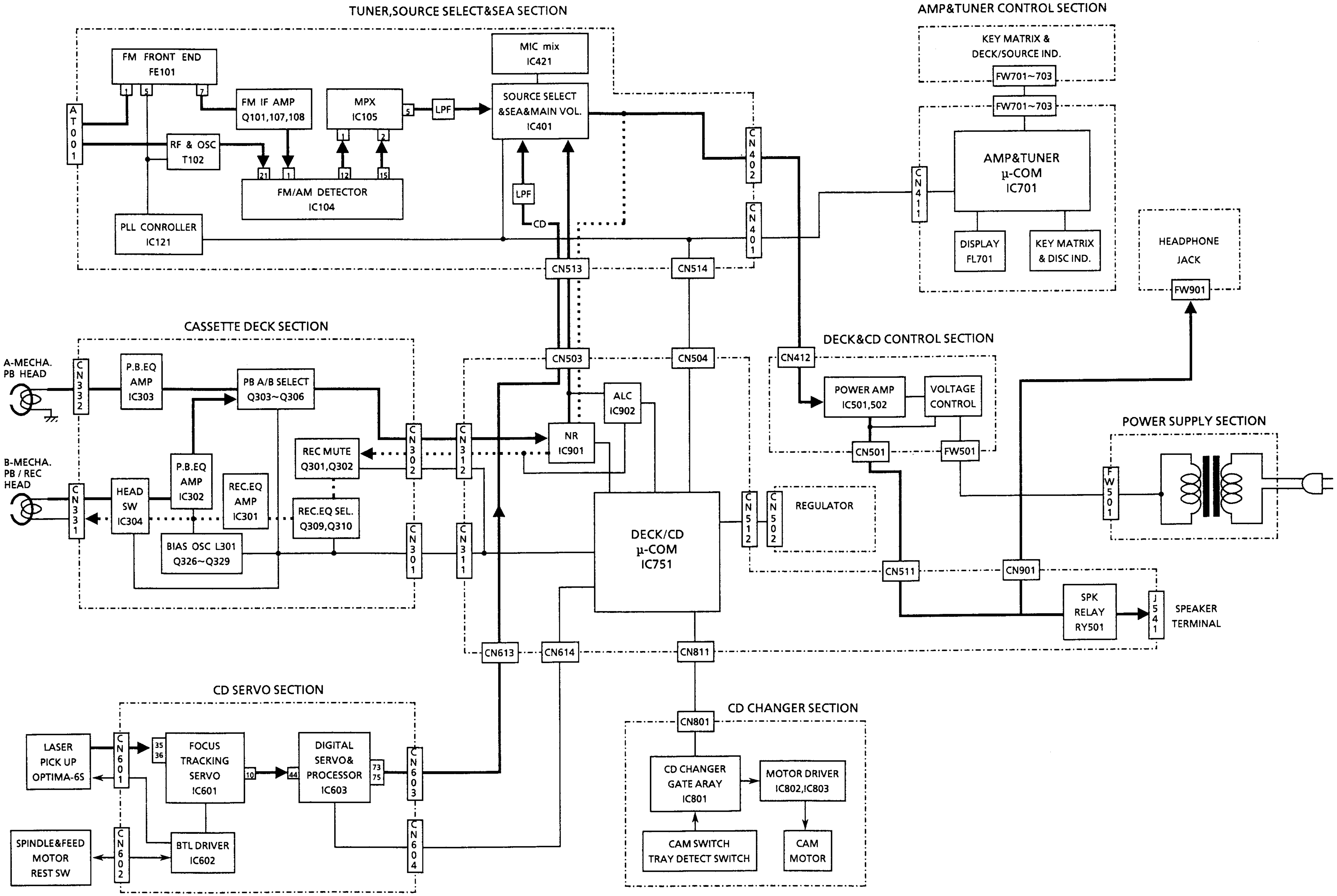
Plug the power cord in, and turn the power on. At this time, check that the laser emits for about 3seconds and the objective lens moves up and down.
Note: Do not observe the laser beam directly.

Play a disc.

Check the eye-pattern at TP602.

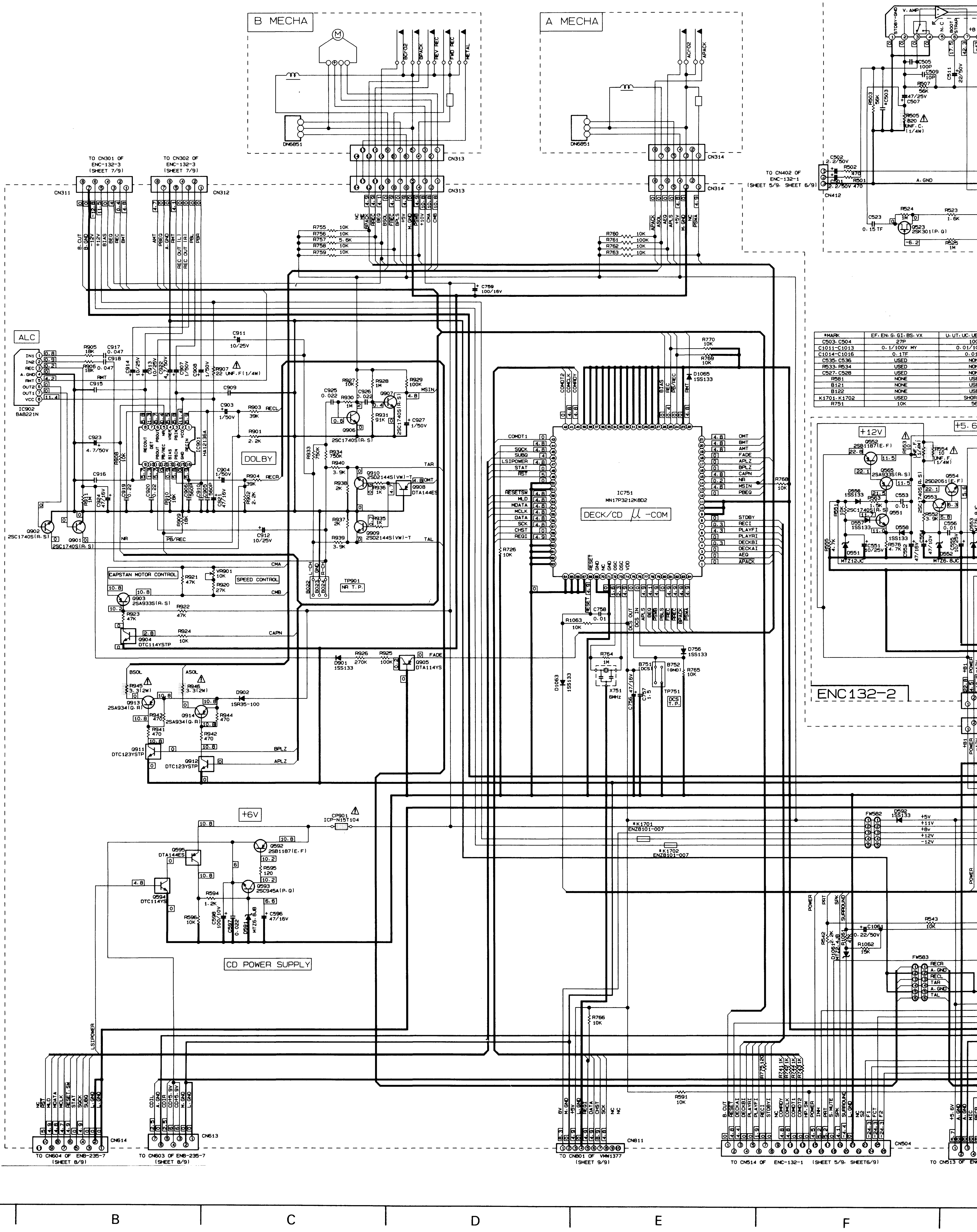
Finish.

Block Diagram

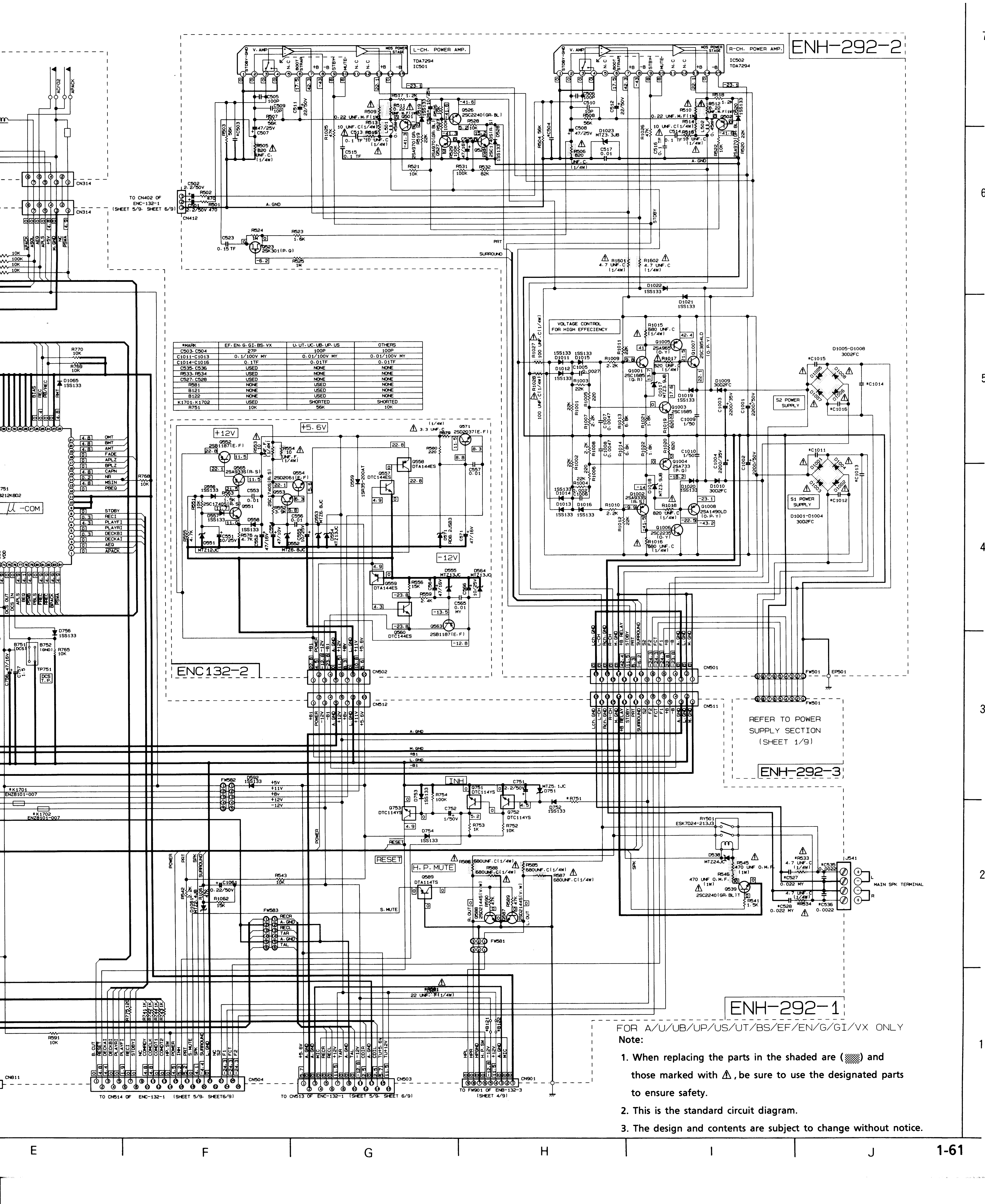

TUNER,SOURCE SELECT&SEA SECTION
FM FRONT END FE101
1
5
7
AT001
RF & OSC T102
FM IF AMP Q101,107,108
MPX IC105
5
LPF
1
2
21
1
12
15
FM/AM DETECTOR IC104
PLL CONROLLER IC121
MIC mix IC421
SOURCE SELECT &SEA&MAIN VOL. IC401
LPF
CD
CN402
CN401
CN513
CN514
AMP&TUNER CONTROL SECTION
KEY MATRIX & DECK/SOURCE IND.
FW701~703
FW701~703
AMP&TUNER µ-COM IC701
CN411
DISPLAY FL701
KEY MATRIX & DISC IND.
HEADPHONE JACK
FW901
CASSETTE DECK SECTION
A-MECHA. PB HEAD
CN332
P.B.EQ AMP IC303
PB A/B SELECT Q303~Q306
B-MECHA. PB / REC HEAD
CN331
HEAD SW IC304
P.B.EQ AMP IC302
REC.EQ AMP IC301
REC MUTE Q301,Q302
REC.EQ SEL. Q309,Q310
BIAS OSC L301 Q326~Q329
CN302
CN301
CN312
CN311
CN503
CN504
ALC IC902
NR IC901
DECK/CD µ-COM IC751
CN512
CN502
REGULATOR
DECK&CD CONTROL SECTION
CN412
POWER AMP IC501,502
VOLTAGE CONTROL
CN501
FW501
POWER SUPPLY SECTION
FW501
CN511
CN901
SPK RELAY RY501
J541
SPEAKER TERMINAL
CN613
CN614
CN811
CD SERVO SECTION
LASER PICK UP OPTIMA-6S
CN601
35
36
FOCUS TRACKING SERVO IC601
10
44
DIGITAL SERVO& PROCESSOR IC603
73
75
CN603
SPINDLE&FEED MOTOR REST SW
CN602
BTL DRIVER IC602
CN604
CD CHANGER SECTION
CN801
CD CHANGER GATE ARAY IC801
MOTOR DRIVER IC802,IC803
CAM SWITCH TRAY DETECT SWITCH
CAM MOTOR

Schematic Diagrams

■ Power Supply,Amplifier & Deck / CD Control Section


B MECHA
A MECHA
DN6851
CN313
CN314
CN311
CN312
TO CN301 OF ENC-132-3 (SHEET 7/9)
TO CN302 OF ENC-132-3 (SHEET 7/9)
TO CN402 OF ENC-132-1 (SHEET 5/9. SHEET 6/9)
CN412
ALC
IC902 BA8221N
DOLBY
IC901 HA12136A
CAPSTAN MOTOR CONTROL
SPEED CONTROL
TP901 NR T.P.
IC751 MN17P3212K8D2
DECK/CD μ-COM
X751 6MHz
TP751 DCS T.P.
+6V
CP901 ICP-N15T104
CD POWER SUPPLY
*K1701 ENZ8101-007
*K1702 ENZ8101-007
+12V
+5.6
ENC132-2
FW582
FW583
CN614
TO CN604 OF ENB-235-7 (SHEET 8/9)
CN613
TO CN603 OF ENB-235-7 (SHEET 8/9)
CN811
TO CN801 OF VMM1377 (SHEET 9/9)
CN504
TO CN514 OF ENC-132-1 (SHEET 5/9. SHEET6/9)
TO CN513 OF EN
A
B
C
D
E
F

*MARK	EF. EN. G. GI. BS. VX	U. UT. UC. UE
C503. C504	27P	100
C1011-C1013	0.1/100V MY	0.01/10
C1014-C1016	0.1TF	0.01
C535. C536	USED	NON
R533. R534	USED	NON
C527. C528	USED	NON
R581	NONE	USE
B121	NONE	USE
B122	NONE	USE
K1701. K1702	USED	SHOR
R751	10K	56


ENH-292-2
L-CH. POWER AMP.
TDA7294
IC501
R-CH. POWER AMP.
IC502
TDA7294
TO CN402 OF ENC-132-1 (SHEET 5/9. SHEET 6/9)
CN412
CN314
A. GND
SURROUND
STDBY
VOLTAGE CONTROL FOR HIGH EFFECIENCY
S2 POWER SUPPLY
S1 POWER SUPPLY
D1005-D1008 30D2FC
D1001-D1004 30D2FC
+12V
+5.6V
-12V
ENC132-2
CN502
CN512
CN501
CN511
FW501
EP501
REFER TO POWER SUPPLY SECTION (SHEET 1/9)
ENH-292-3
INH
RESET
H.P. MUTE
RY501 ESK7D24-213J3
J541
MAIN SPK TERMINAL
L
R
FW582
FW583
FW581
ENH-292-1
CN504
CN503
CN901
CN811
TO CN514 OF ENC-132-1 (SHEET 5/9. SHEET6/9)
TO CN513 OF ENC-132-1 (SHEET 5/9. SHEET 6/9)
TO FW901 OF ENB-132-3 (SHEET 4/9)
μ-COM
E
F
G
H
I
J
7
6
5
4
3
2
1

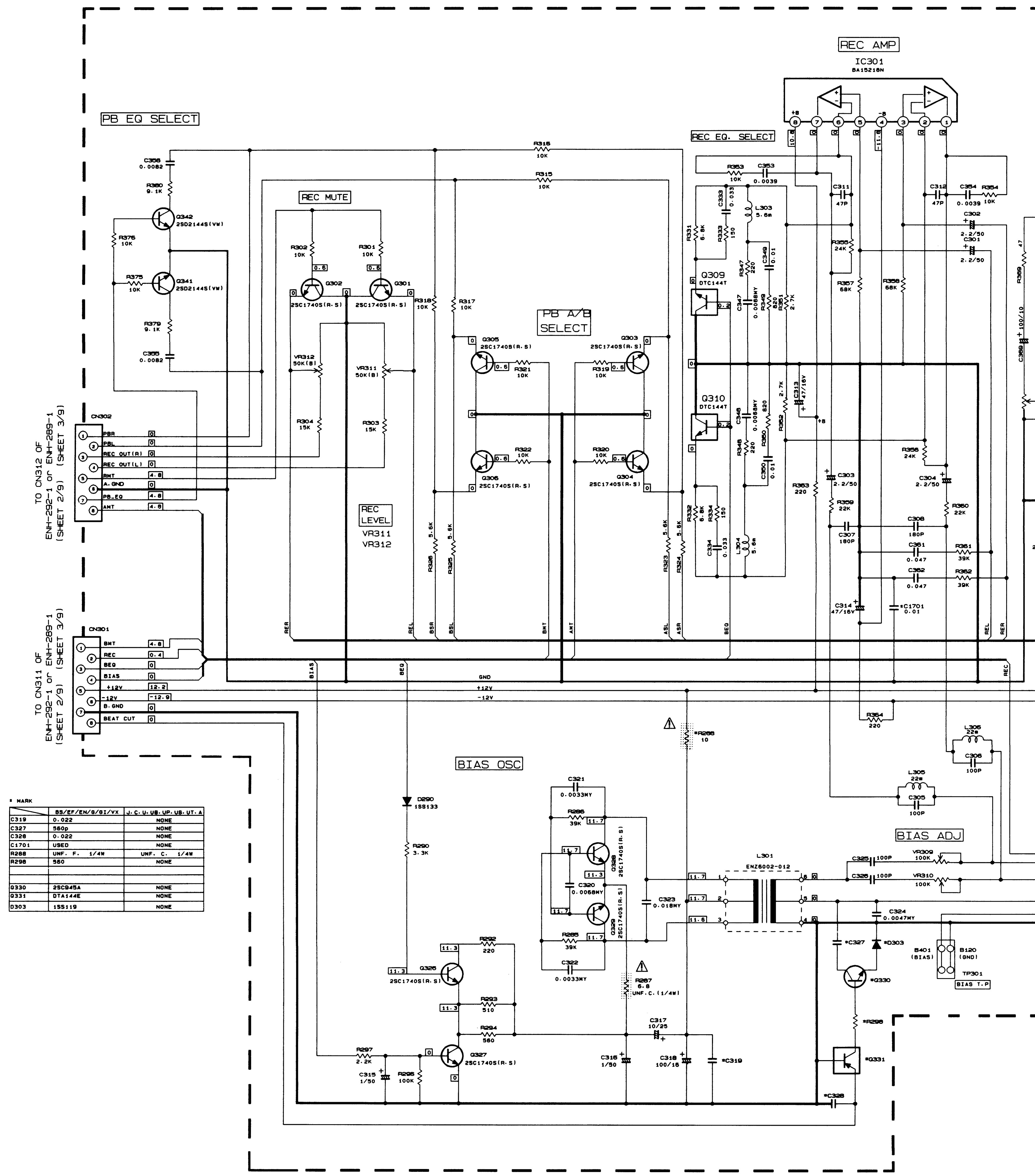
*MARK	EF. EN. G. GI. BS. VX	U. UT. UC. UB. UP. US	OTHERS
C503. C504	27P	100P	100P
C1011-C1013	0.1/100V MY	0.01/100V MY	0.01/100V MY
C1014-C1016	0.1TF	0.01TF	0.01TF
C535. C536	USED	NONE	NONE
R533. R534	USED	NONE	NONE
C527. C528	USED	NONE	NONE
R581	NONE	USED	NONE
B121	NONE	USED	NONE
B122	NONE	USED	NONE
K1701. K1702	USED	SHORTED	SHORTED
R751	10K	56K	10K

FOR A/U/UB/UP/US/UT/BS/EF/EN/G/GI/VX ONLY

Note:

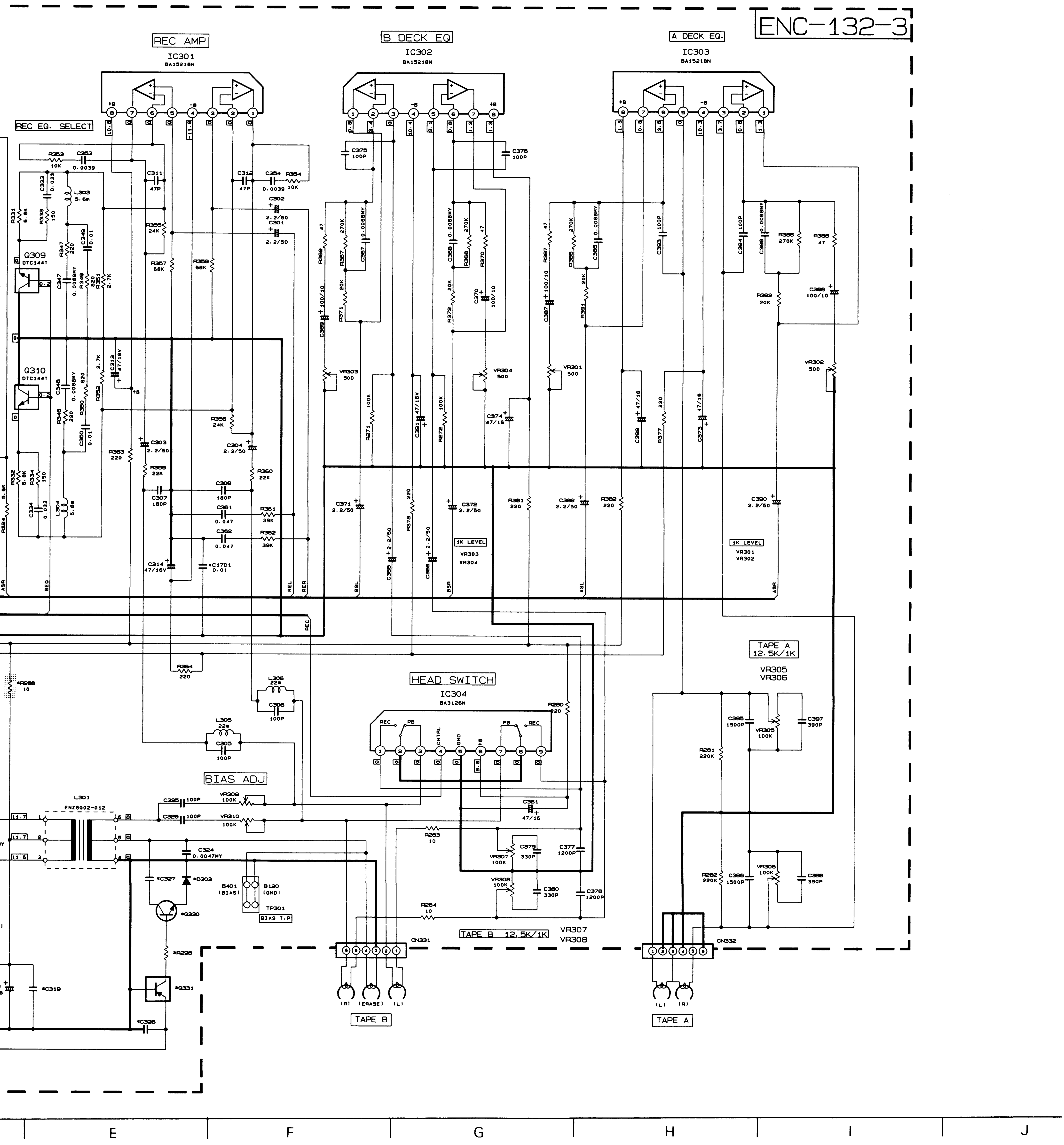
1. When replacing the parts in the shaded are (▨) and those marked with ⚠, be sure to use the designated parts to ensure safety.
2. This is the standard circuit diagram.
3. The design and contents are subject to change without notice.

■ Deck Section

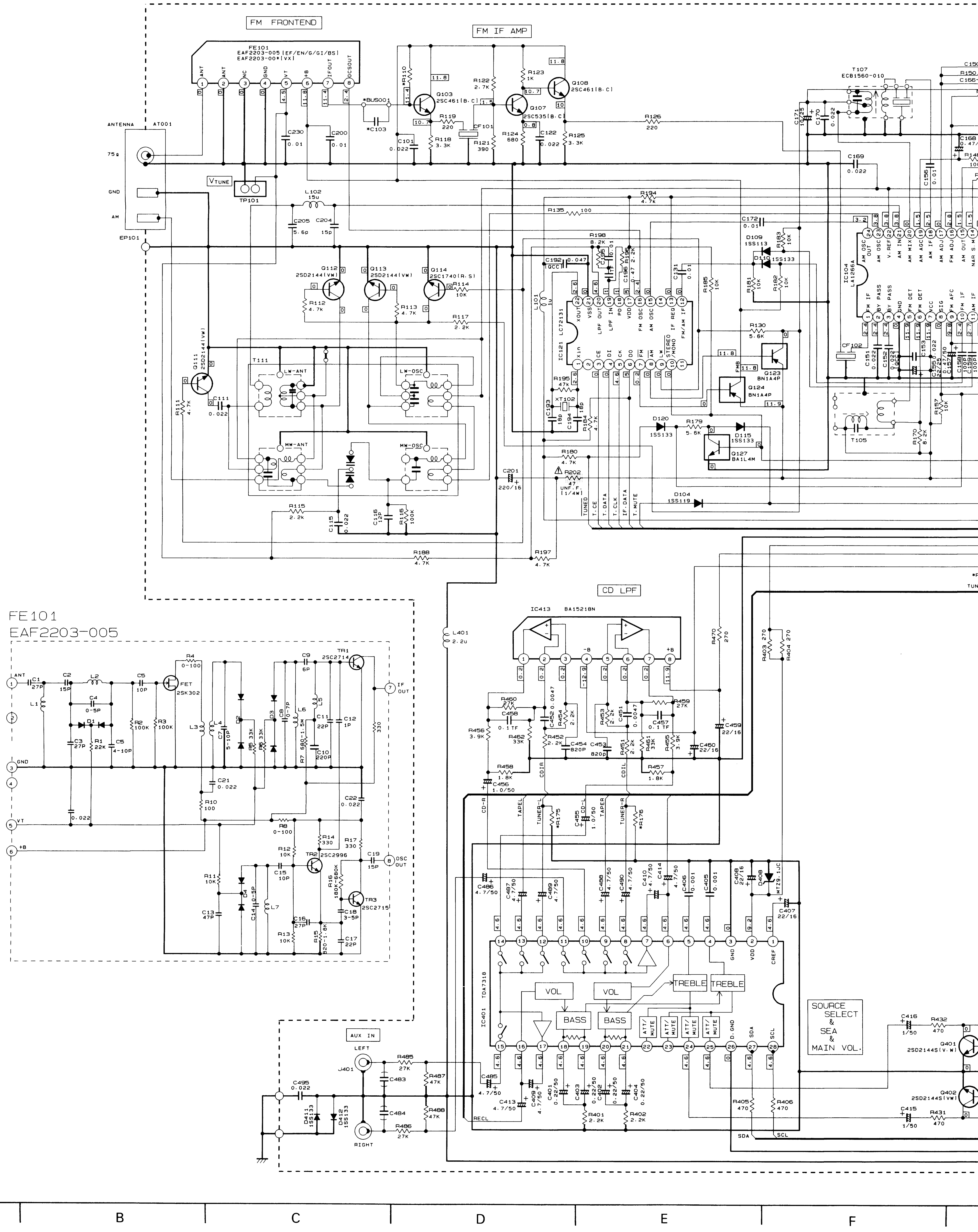

PB EQ SELECT
REC MUTE
PB A/B SELECT
REC AMP
IC301
BA15218N
REC EQ. SELECT
REC LEVEL
VR311
VR312
BIAS OSC
BIAS ADJ
CN302
CN301
TO CN312 OF ENH-292-1 or ENH-289-1 (SHEET 2/9) (SHEET 3/9)
TO CN311 OF ENH-292-1 or ENH-289-1 (SHEET 2/9) (SHEET 3/9)
PBR
PBL
REC OUT(R)
REC OUT(L)
BMT
A.GND
PB.EQ
AMT
REC
BEQ
BIAS
+12V
-12V
B.GND
BEAT CUT
GND
Q342 2SD2144S(VW)
Q341 2SD2144S(VW)
Q302 2SC1740S(R.S)
Q301 2SC1740S(R.S)
Q305 2SC1740S(R.S)
Q303 2SC1740S(R.S)
Q306 2SC1740S(R.S)
Q304 2SC1740S(R.S)
Q309 DTC144T
Q310 DTC144T
Q326 2SC1740S(R.S)
Q327 2SC1740S(R.S)
Q328 2SC1740S(R.S)
Q329 2SC1740S(R.S)
Q330
Q331
D290 1SS133
D303
L301 ENZ6002-012
L303 5.6m
L304 5.6m
L305 22m
L306 22m
VR309 100K
VR310 100K
B401 (BIAS)
B120 (GND)
TP301
BIAS T.P
R288 10
R287 6.8 UNF.C.(1/4W)

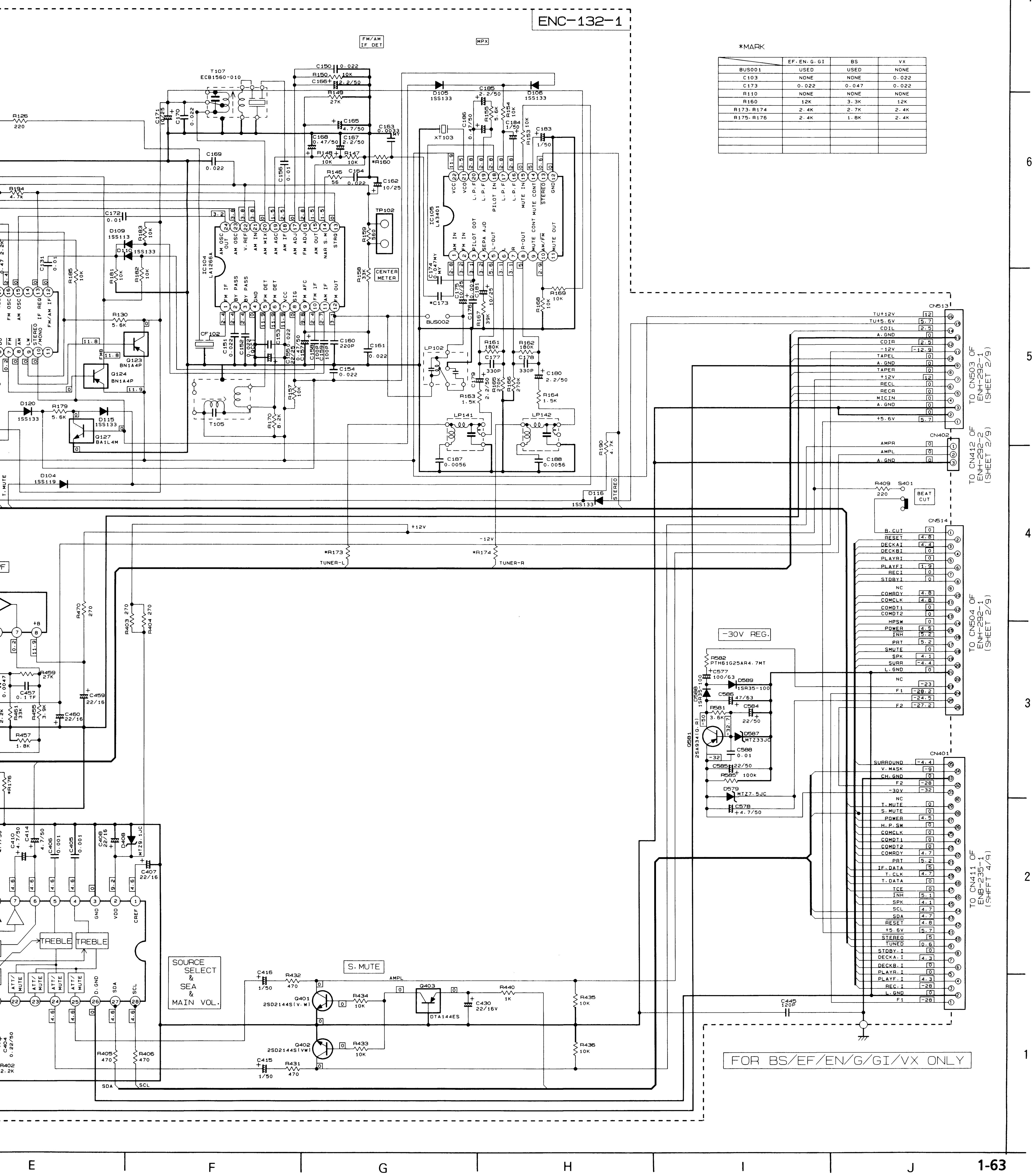
* MARK

	BS/EF/EN/G/GI/VX	J.C.U.UB.UP.US.UT.A
C319	0.022	NONE
C327	560p	NONE
C328	0.022	NONE
C1701	USED	NONE
R288	UNF. F. 1/4W	UNF. C. 1/4W
R298	560	NONE
Q330	2SC945A	NONE
Q331	DTA144E	NONE
D303	1SS119	NONE


ENC-132-3
REC AMP
IC301
BA15218N
B DECK EQ
IC302
BA15218N
A DECK EQ.
IC303
BA15218N
REC EQ. SELECT
Q309
DTC144T
Q310
DTC144T
L303
5.6m
L304
5.6m
C311
47P
C312
47P
R353
10K
C353
0.0039
C354
0.0039
R354
10K
C302
2.2/50
C301
2.2/50
R355
24K
R356
24K
R357
68K
R358
68K
C303
2.2/50
C304
2.2/50
R359
22K
R360
22K
C307
180P
C308
180P
C361
0.047
C362
0.047
R361
39K
R362
39K
C313
47/16V
C314
47/16V
*C1701
0.01
R363
220
R364
220
C375
100P
C376
100P
C367
0.0068MY
C368
0.0068MY
R367
270K
R368
270K
R369
47
R370
47
R371
20K
R372
20K
C369
100/10
C370
100/10
VR303
500
VR304
500
R271
100K
R272
100K
C391
47/16V
C374
47/16
C371
2.2/50
C372
2.2/50
R378
220
C365
2.2/50
C366
2.2/50
1K LEVEL
VR303
VR304
R381
220
C389
2.2/50
R382
220
C390
2.2/50
1K LEVEL
VR301
VR302
C383
100P
C384
100P
C385
0.0068MY
C386
0.0068MY
R385
270K
R386
270K
R387
47
R388
47
R391
20K
R392
20K
C387
100/10
C388
100/10
VR301
500
VR302
500
C392
47/16
C373
47/16
R377
220
BSL
BSR
ASL
ASR
BEQ
REL
RER
REC
*R288
10
L306
22m
C306
100P
L305
22m
C305
100P
BIAS ADJ
HEAD SWITCH
IC304
BA3126N
REC
PB
CNTRL
GND
+B
R280
220
C381
47/16
L301
ENZ6002-012
C325
100P
C326
100P
VR309
100K
VR310
100K
C324
0.0047MY
*C327
*D303
*Q330
*R298
*Q331
*C319
*C328
B401
(BIAS)
B120
(GND)
TP301
BIAS T.P
R283
10
R284
10
VR307
100K
VR308
100K
C379
330P
C380
330P
C377
1200P
C378
1200P
TAPE B 12.5K/1K
VR307
VR308
CN331
(R)
(ERASE)
(L)
TAPE B
TAPE A
12.5K/1K
VR305
VR306
C395
1500P
C396
1500P
C397
390P
C398
390P
R281
220K
R282
220K
CN332
(L)
(R)
TAPE A
E
F
G
H
I
J

■ Source Selector & Tuner Section (For BS,EF,EN,G,GI,VX)

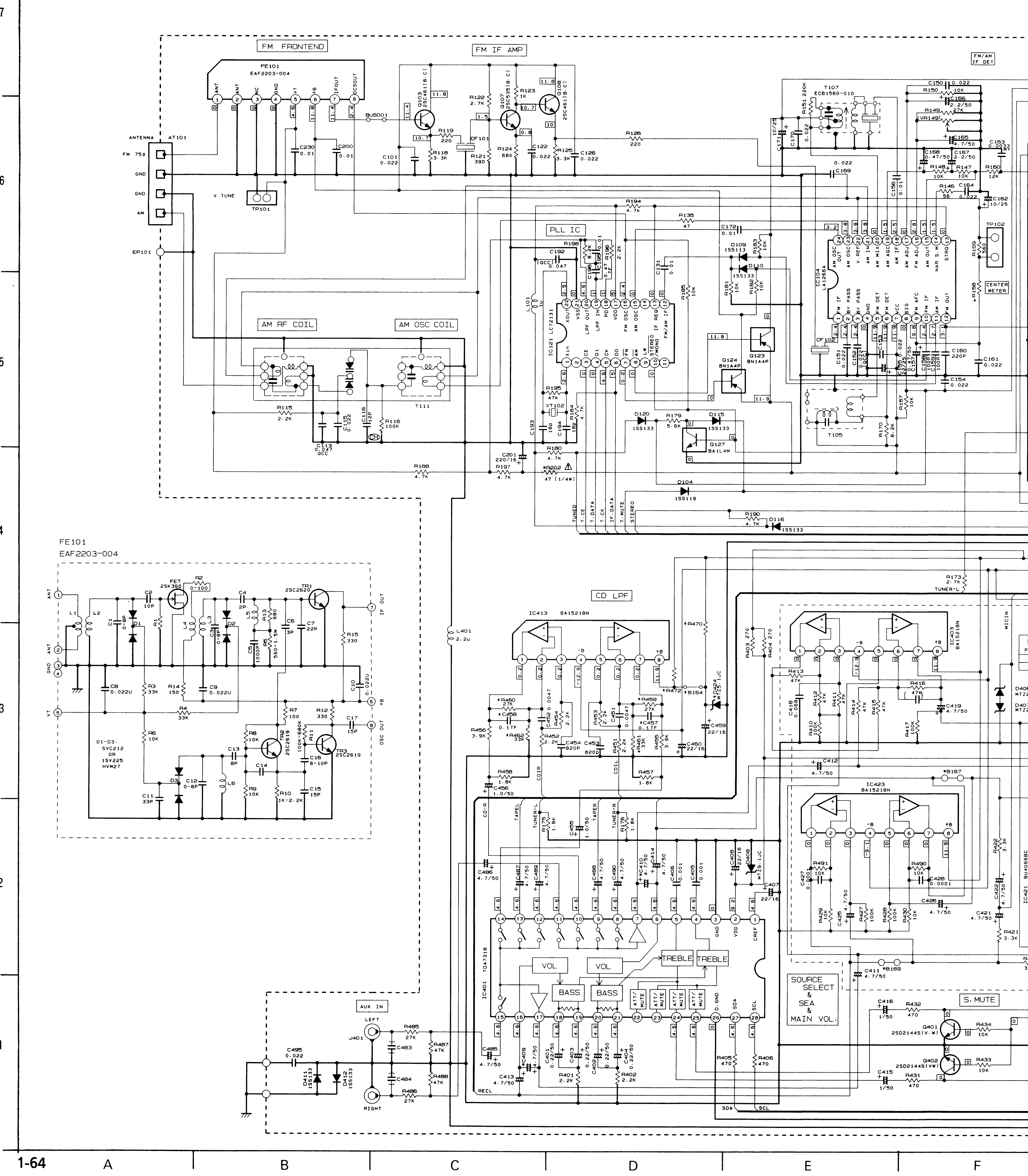

FM FRONTEND
FE101
EAF2203-005 [EF/EN/G/GI/BS]
EAF2203-00* [VX]
FM IF AMP
ANTENNA
AT001
75Ω
GND
AM
EP101
VTUNE
TP101
L102 15u
Q103 2SC461[B-C]
Q107 2SC535[B-C]
Q108 2SC461[B-C]
CF101
*BUS001
T107 ECB1560-010
IC104 LA1266A
IC121 LC72131
XT102
Q111 2SD2144(VW)
Q112 2SD2144(VW)
Q113 2SD2144(VW)
Q114 2SC1740(R.S)
T111
LW-ANT
LW-OSC
MW-ANT
MW-OSC
Q123 BN1A4P
Q124 BN1A4P
Q127 BA1L4M
D109 1SS113
D110 1SS133
D115 1SS133
D120 1SS133
D104 1SS119
CF102
T105
TUNED
T.CE
T.DATA
T.CLK
IF.DATA
T.MUTE
FE101
EAF2203-005
FET 2SK302
TR1 2SC2714
TR2 2SC2996
TR3 2SC2715
IF OUT
OSC OUT
CD LPF
IC413 BA15218N
L401 2.2u
IC401 TDA7318
VOL
BASS
TREBLE
ATT/MUTE
SOURCE SELECT & SEA & MAIN VOL.
Q401 2SD2144S(V.W)
Q402 2SD2144S(VW)
D408 MTZ9.1JC
AUX IN
LEFT
RIGHT
J401
D411 1SS133
D412 1SS133
SDA
SCL
CD-R
CD-L
TAPE-L
TAPE-R
TUNER-L
TUNER-R
RECL
A
B
C
D
E
F

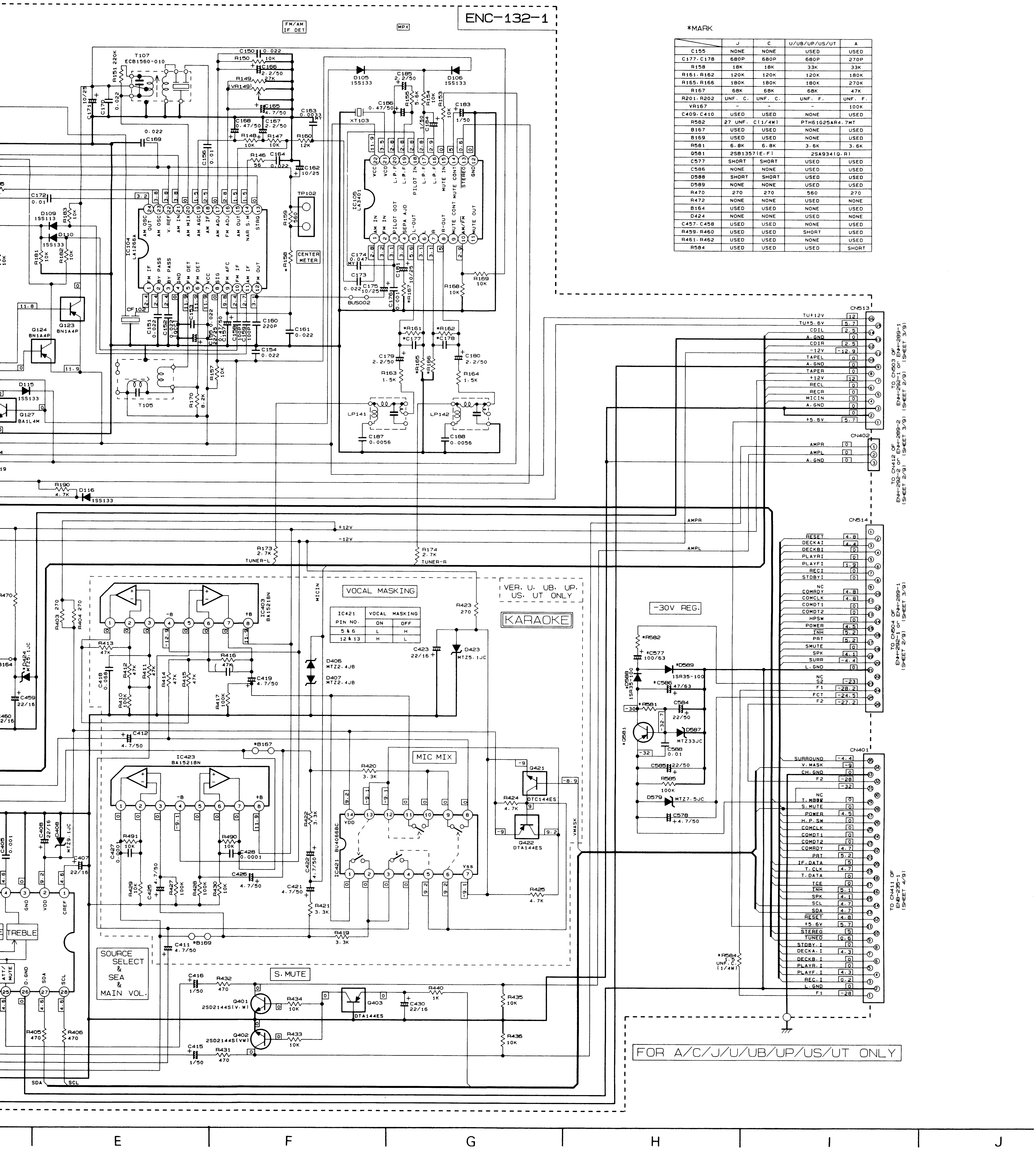

ENC-132-1
FM/AM IF DET
MPX
T107 ECB1560-010
IC104 LA1266A
IC105 LA3401
TP102
CENTER METER
XT103
BUS002
LP102
LP141
LP142
T105
Q123 BN1A4P
Q124 BN1A4P
Q127 BA1L4M
D105 1SS133
D106 1SS133
D109 1SS113
D110 1SS133
D115 1SS133
D116 1SS133
D120 1SS133
D104 1SS119
T.MUTE
STEREO
+12V
-12V
*R173 TUNER-L
*R174 TUNER-R
CN513
TO CN503 OF ENH-292-1 (SHEET 2/9)
CN402
TO CN412 OF ENH-292-2 (SHEET 2/9)
R409 220
S401
BEAT CUT
CN514
TO CN504 OF ENH-292-1 (SHEET 2/9)
-30V REG.
R582 PTH61G25AR4.7MT
Q581 2SA934(Q,R)
D587 MTZ33JC
D579 MTZ7.5JC
D589 1SR35-100
D588 1SR35-100
CN401
TO CN411 OF ENB-235-1 (SHEET 4/9)
TREBLE
TREBLE
ATT/MUTE
SOURCE SELECT & SEA & MAIN VOL.
S.MUTE
AMPL
Q401 2SD2144S(V,W)
Q402 2SD2144S(V,W)
Q403 DTA144ES
D408 MTZ9.1JC
SDA
SCL
C445 120P
FOR BS/EF/EN/G/GI/VX ONLY
7
6
5
4
3
2
1
E
F
G
H
I
J

*MARK

	EF.EN.G.GI	BS	VX
BUS001	USED	USED	NONE
C103	NONE	NONE	0.022
C173	0.022	0.047	0.022
R110	NONE	NONE	NONE
R160	12K	3.3K	12K
R173.R174	2.4K	2.7K	2.4K
R175.R176	2.4K	1.8K	2.4K

■ Source Selector & Tuner Section (For A,U,UB,UP,US,UT)

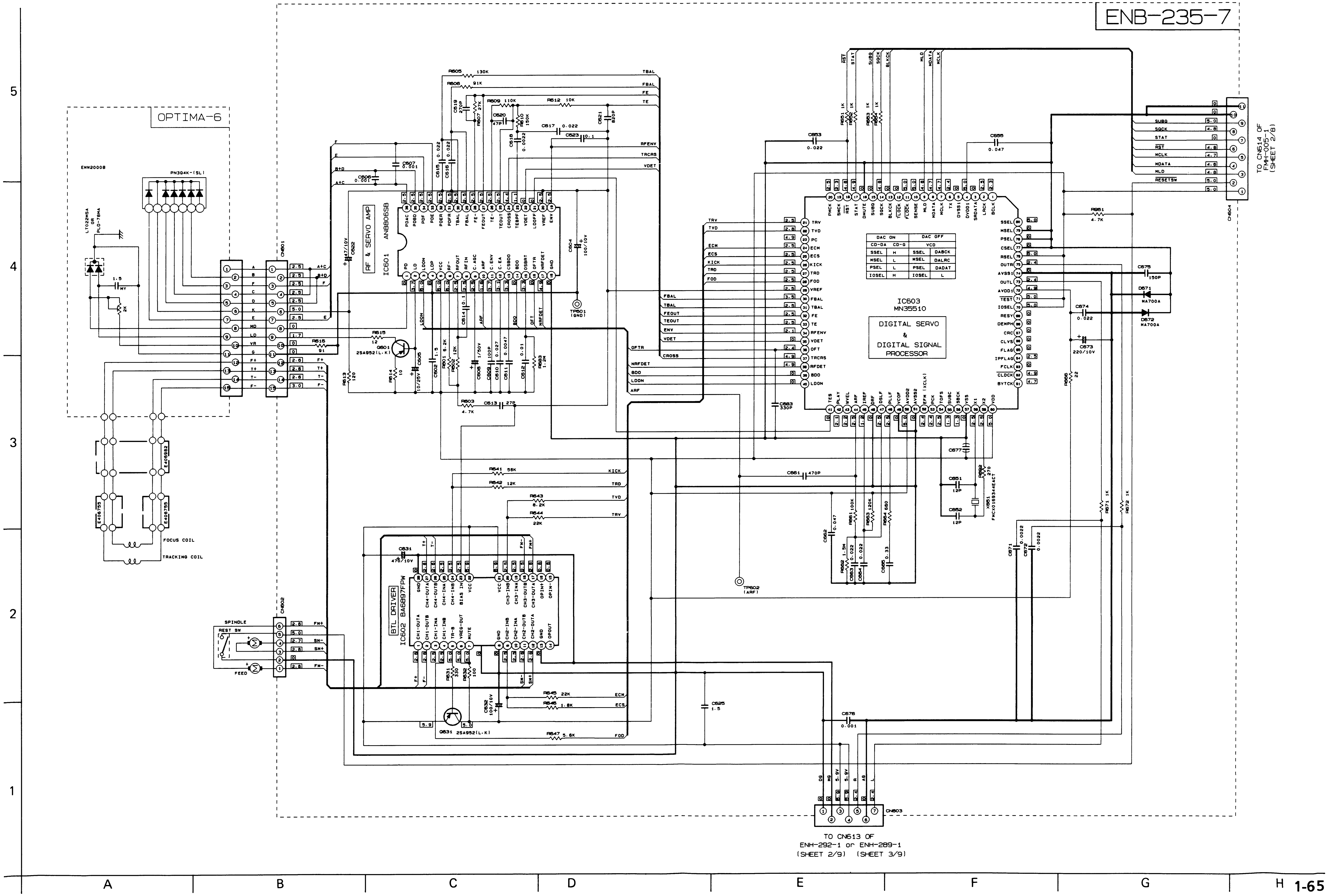

7
6
5
4
3
2
1
FM FRONTEND
FE101
EAF2203-004
FM IF AMP
FM/AM IF DET
ANTENNA
AT101
FM 75Ω
GND
GND
AM
V.TUNE
TP101
EP101
BUS001
Q103 2SC461(B,C)
Q107 2SC535(B,C)
Q108 2SC461(B,C)
CF101
T107 ECB1560-010
PLL IC
IC121 LC72131
AM RF COIL
AM OSC COIL
T111
XT102
IC104 LA1266A
TP102
CENTER METER
Q123 BN1A4P
Q124 BN1A4P
Q127 BA1L4M
T105
D104 1SS119
D116 1SS133
TUNED
T.CE
T.DATA
T.CK
IF.DATA
T.MUTE
STEREO
TUNER-L
FE101
EAF2203-004
FET 2SK360
TR1 2SC2620
TR2 2SC2619
TR3 2SC2619
ANT
GND
VT
IF OUT
OSC OUT
+B
D1-D3: SVC212 OR 1SV225 HVM27
CD LPF
IC413 BA15218N
IC403 BA15218N
IC423 BA15218N
L401 2.2U
TDA7318
IC401
VOL
BASS
TREBLE
ATT/MUTE
SOURCE SELECT & SEA & MAIN VOL.
S.MUTE
Q401 2SD2144S(V.W)
Q402 2SD2144S(VW)
AUX IN
LEFT
RIGHT
J401
D413 1SS133
D412 1SS133
CD-R
TAPEL
TUNER-L
TAPER
TUNER-R
CDIR
CDIL
RECL
SDA
SCL
MICIN
IC421 BU4066BC
A
B
C
D
E
F


ENC-132-1
FM/AM IF DET
MPX
IC104 LA1266A
IC105 LA3401
CENTER METER
TP102
T107 ECB1560-010
T105
LP141
LP142
XT103
BU5002
VOCAL MASKING
VER. U, UB, UP, US, UT ONLY
KARAOKE
IC403 BA15218N
IC423 BA15218N
IC421 BU4066BC
MIC MIX
S. MUTE
SOURCE SELECT & SEA & MAIN VOL.
TREBLE
-30V REG.
CN513
TO CN503 OF ENH-289-1 or ENH-292-1 (SHEET 2/9) (SHEET 3/9)
CN402
TO CN412 OF ENH-289-2 or ENH-292-2 (SHEET 2/9) (SHEET 3/9)
CN514
TO CN504 OF ENH-289-1 or ENH-292-1 (SHEET 2/9) (SHEET 3/9)
CN401
TO CN411 OF ENB-235-1 (SHEET 4/9)
FOR A/C/J/U/UB/UP/US/UT ONLY
E
F
G
H
I
J

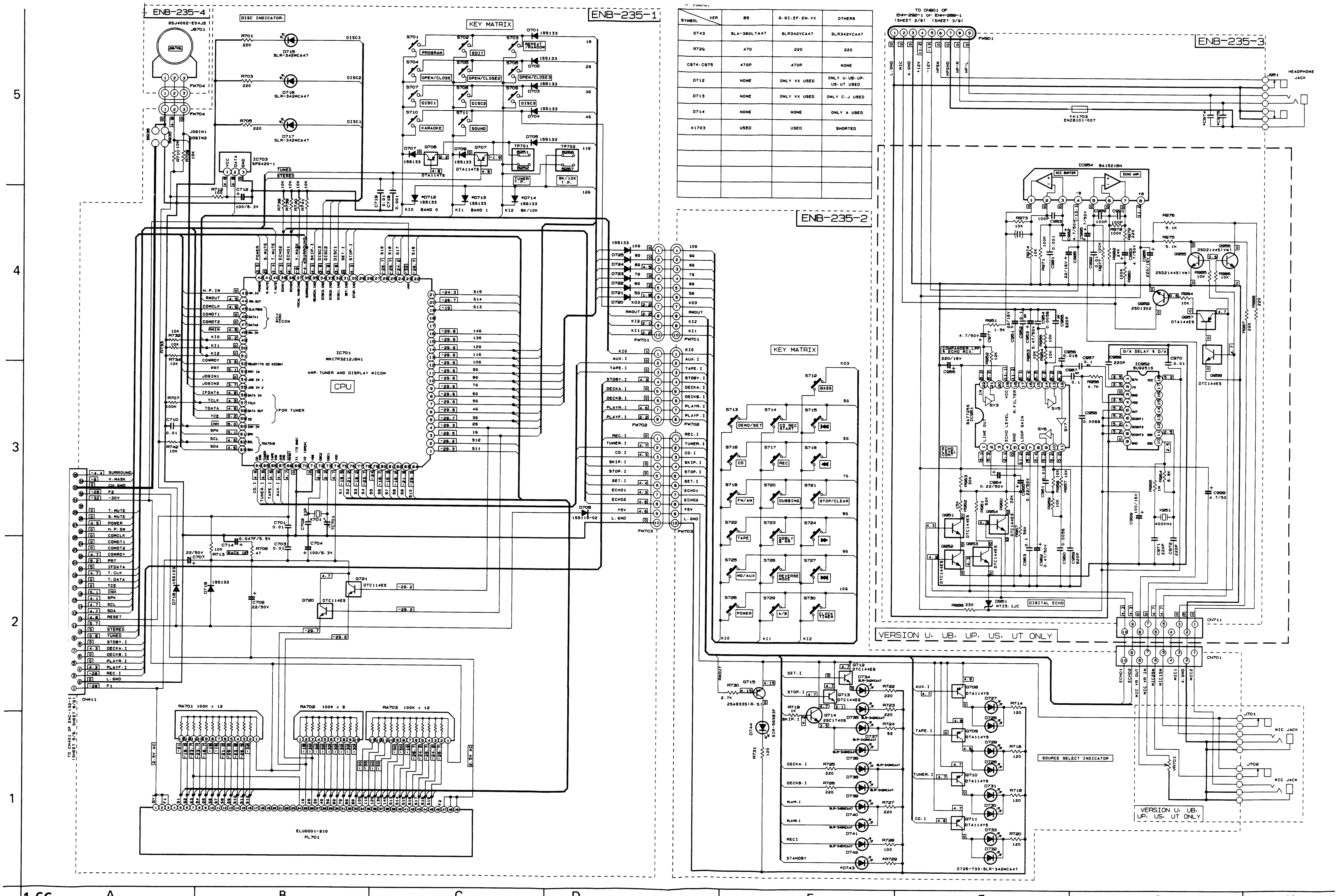
*MARK

	J	C	U/UB/UP/US/UT	A
C155	NONE	NONE	USED	USED
C177·C178	680P	680P	680P	270P
R158	18K	18K	33K	33K
R161·R162	120K	120K	120K	180K
R165·R166	180K	180K	180K	270K
R167	68K	68K	68K	47K
R201·R202	UNF. C.	UNF. C.	UNF. F.	UNF. F.
VR167	–	–	–	100K
C409·C410	USED	USED	NONE	USED
R582	27 UNF. C(1/4W)		PTH61G25AR4.7MT	
B167	USED	USED	NONE	USED
B169	USED	USED	NONE	USED
R581	6.8K	6.8K	3.6K	3.6K
Q581	2SB1357(E·F)		2SA934(Q·R)	
C577	SHORT	SHORT	USED	USED
C586	NONE	NONE	USED	USED
D588	SHORT	SHORT	USED	USED
D589	NONE	NONE	USED	USED
R470	270	270	560	270
R472	NONE	NONE	USED	NONE
B164	USED	USED	NONE	USED
D424	NONE	NONE	USED	NONE
C457·C458	USED	USED	NONE	USED
R459·R460	USED	USED	SHORT	USED
R461·R462	USED	USED	NONE	USED
R584	USED	USED	USED	SHORT

■ CD Section


ENB-235-7
OPTIMA-6
ENW2000B
PN304K-(SL)
LT022MSA OR PLD-78MA
FOCUS COIL
TRACKING COIL
CN601
CN602
SPINDLE
REST SW
FEED
IC601 AN8806SB
RF & SERVO AMP
Q601 2SA952(L·K)
TP601 (GND)
IC602 BA6897FPW
BTL DRIVER
Q631 2SA952(L·K)
IC603 MN35510
DIGITAL SERVO & DIGITAL SIGNAL PROCESSOR
TP602 (ARF)
D671 MA700A
D672 MA700A
X651 FMCX0169344EACT
CN604
TO CN614 OF FMH-005-1 (SHEET 2/8)
CN603
TO CN613 OF ENH-292-1 or ENH-289-1 (SHEET 2/9) (SHEET 3/9)
DAC ON | DAC OFF
CD-DA | CD-G | VCO
SSEL | H | SSEL | DABCK
MSEL | L | MSEL | DALRC
PSEL | L | PSEL | DADAT
IOSEL | H | IOSEL | L
A
B
C
D
E
F
G
H
1
2
3
4
5

■ Front & Mic. Amplifier (for U,UB,UP,US,UT only) Section


ENB-235-4
ENB-235-1
ENB-235-2
ENB-235-3
DISC INDICATOR
KEY MATRIX
IC701 MN17P3212J6N1
AMP. TUNER AND DISPLAY MICOM
CPU
IC703 SPS420-1
IC954 BA1521BN
IC952 BU9251S
CN411
CN711
CN701
FW701
FW702
FW703
FW704
FW901
TO CN901 OF ENH-292-1 or ENH-289-1 (SHEET 2/8) (SHEET 3/9)
TO CN401 OF ENC-133-1 (SHEET 5/8, SHEET 6/9)
RA701 100K × 12
RA702 100K × 9
RA703 100K × 12
ELU0001-210 FL701
HEADPHONE JACK
J951
J701 MIC JACK
J702 MIC JACK
SOURCE SELECT INDICATOR
D726-733: SLR-342MCA47
DIGITAL ECHO
VERSION U, UB, UP, US, UT ONLY
VERSION U, UB, UP, US, UT ONLY
5
4
3
2
1
A
B
C
D
E
F
G
H

SYMBOL \ VER	BS	G. GI. EF. EN. VX	OTHERS
D743	SLA-380LTA47	SLR342VCA47	SLR342VCA47
R729	470	220	220
C974. C975	470P	470P	NONE
D712	NONE	ONLY VX USED	ONLY U. UB. UP. US. UT USED
D713	NONE	ONLY VX USED	ONLY C. J USED
D714	NONE	NONE	ONLY A USED
K1703	USED	USED	SHORTED

■ Changer Mechanism Control Section

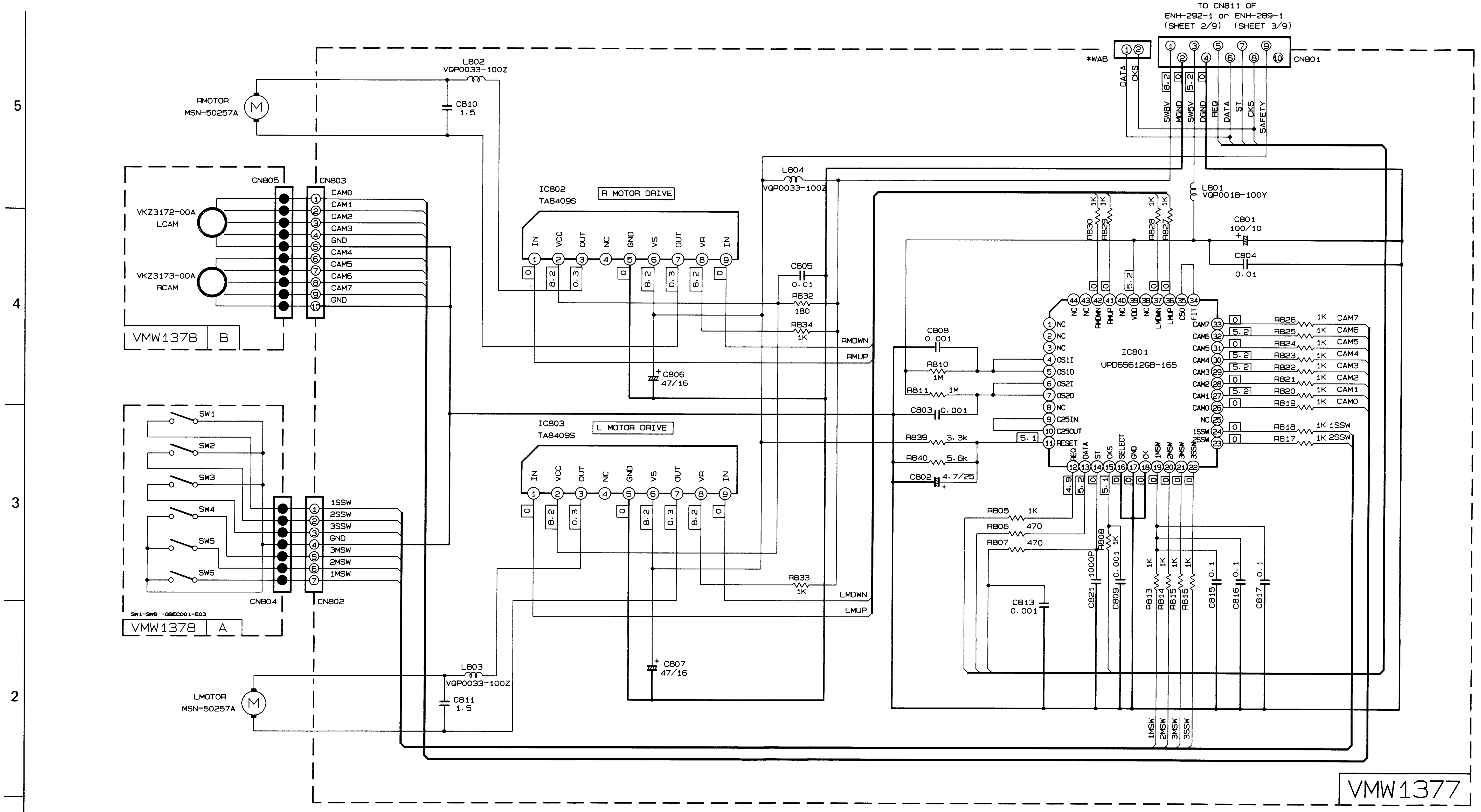

TO CN811 OF
ENH-292-1 or ENH-289-1
(SHEET 2/9) (SHEET 3/9)
*WAB
DATA
CKS
CN801
SW8V
MGND
SW5V
DGND
REQ
DATA
ST
CKS
SAFETY
L802
VQP0033-100Z
C810
1.5
RMOTOR
MSN-50257A
CN805
CN803
CAM0
CAM1
CAM2
CAM3
GND
CAM4
CAM5
CAM6
CAM7
GND
VKZ3172-00A
LCAM
VKZ3173-00A
RCAM
VMW1378 B
IC802
TA8409S
R MOTOR DRIVE
IN
VCC
OUT
NC
GND
VS
OUT
VR
IN
L804
VQP0033-100Z
C805
0.01
R832
180
R834
1K
RMDWN
RMUP
C806
47/16
L801
VQP0018-100Y
R830
R829
R828
R827
1K
C801
100/10
C804
0.01
IC801
UPD65612GB-165
NC
OS1I
OS1O
OS2I
OS2O
C25IN
C25OUT
RESET
REQ
DATA
ST
CKS
SELECT
GND
CK
1MSW
2MSW
3MSW
3SSW
2SSW
1SSW
RMDWN
RMUP
VDD
LMDWN
LMUP
C50
FIT
R826
R825
R824
R823
R822
R821
R820
R819
R818
R817
C808
0.001
R810
1M
R811
1M
C803
0.001
R839
3.3k
R840
5.6k
C802
4.7/25
SW1
SW2
SW3
SW4
SW5
SW6
CN804
CN802
1SSW
2SSW
3SSW
GND
3MSW
2MSW
1MSW
SW1-SW6 : QSEC001-E03
VMW1378 A
IC803
TA8409S
L MOTOR DRIVE
R833
1K
LMDWN
LMUP
C807
47/16
R805
1K
R806
470
R807
470
R808
1K
C821
1000P
C809
0.001
C813
0.001
R813
R814
R815
R816
C815
C816
C817
0.1
L803
VQP0033-100Z
C811
1.5
LMOTOR
MSN-50257A
VMW1377

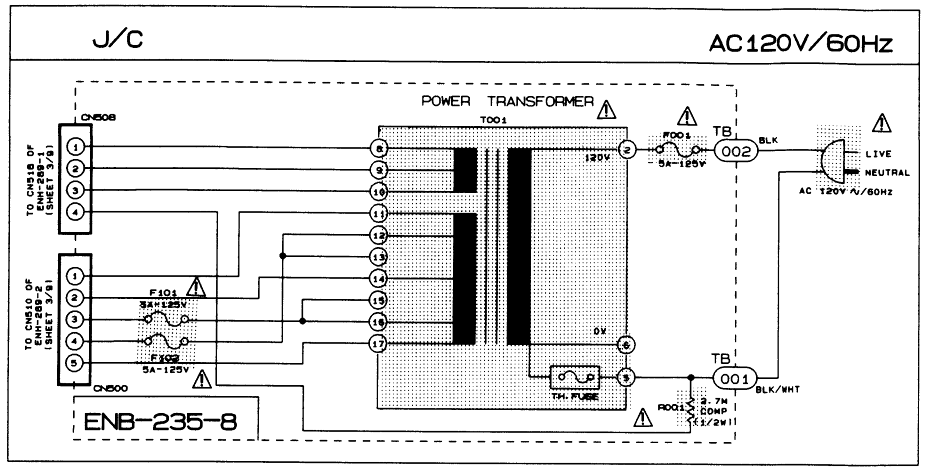
TABLE 1 CAM PATTERN LIST

CAM NO / POSITION	LCAM 0	LCAM 1	LCAM 2	LCAM 3	COM	RCAM 4	RCAM 5	RCAM 6	RCAM 7	POSITION
MAIN TRAY1	0	1	1	1	0	1	1	1	0	EMERGENCY
SUB TRAY1	0	0	1	1	0	1	1	0	0	TRAY1 STANDBY
CAMR 1	0	1	0	1	0	1	0	1	0	TRAY1 CHECKING
MAIN TRAY2	1	0	0	1	0	1	0	0	1	TRAY2 STANDBY
SUB TRAY2	1	1	1	0	0	0	1	1	1	TRAY2 CHECKING
CAMR 2	1	0	1	0	0	0	1	0	1	TRAY3 STANDBY
MAIN TRAY3	1	1	0	0	0	0	0	1	1	TRAY3 CHECKING
SUB TRAY3	1	0	0	0	0					
OFF	1	1	1	1	0	1	1	1	1	OFF

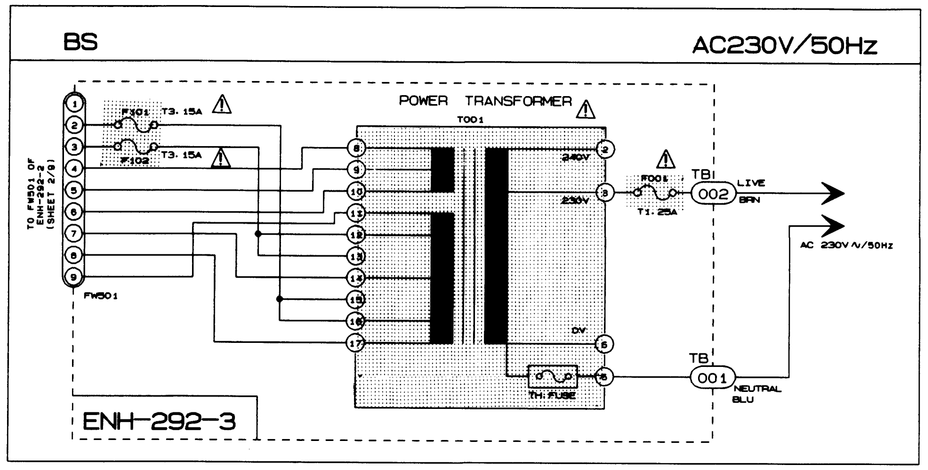
0=0V
1=5V

■ Power Supply Section

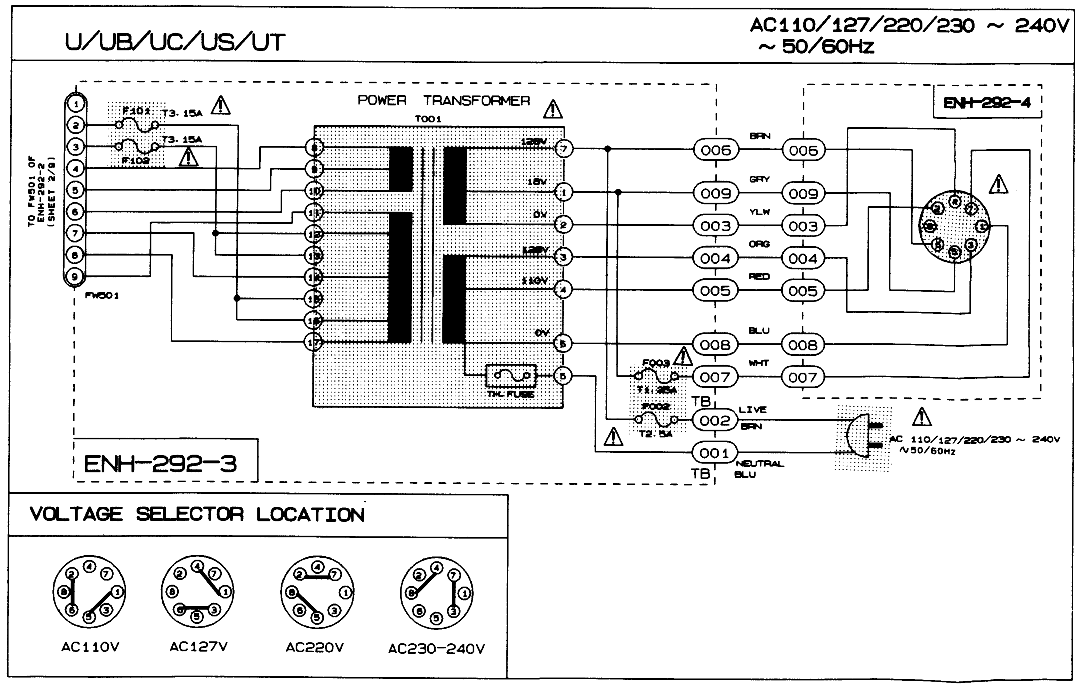
POWER SUPPLY BLOCK


J/C
AC120V/60Hz
POWER TRANSFORMER
T001
CN508
TO CN510 OF ENH-289 (SHEET 3/9)
CN500
F101 5A-125V
F102 5A-125V
F001 5A-125V
120V
0V
TH. FUSE
TB 002
TB 001
BLK
BLK/WHT
LIVE
NEUTRAL
AC 120V ~/60Hz
R001 2.7M COMP 1/2W
ENB-235-8

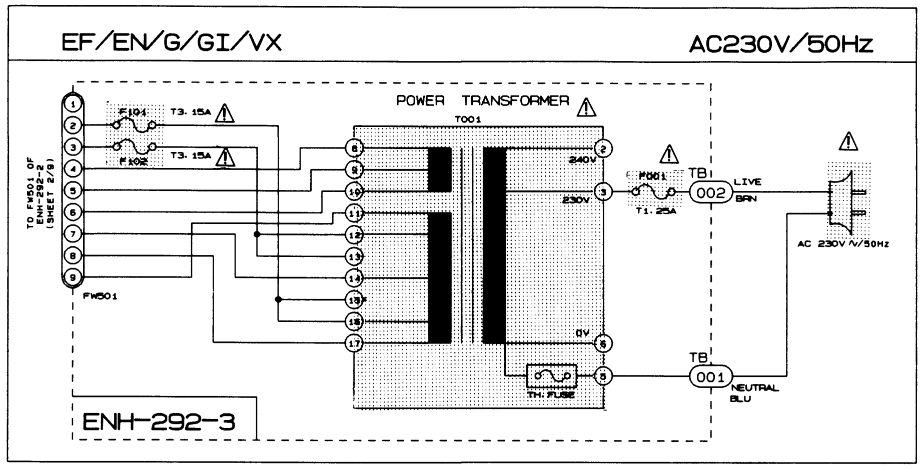
POWER SUPPLY BLOCK


BS
AC230V/50Hz
POWER TRANSFORMER
T001
F101 T3.15A
F102 T3.15A
F001 T1.25A
TO FW501 OF ENH-292-2 (SHEET 2/9)
FW501
240V
230V
0V
TH. FUSE
TB 002
TB 001
LIVE BRN
NEUTRAL BLU
AC 230V ~/50Hz
ENH-292-3

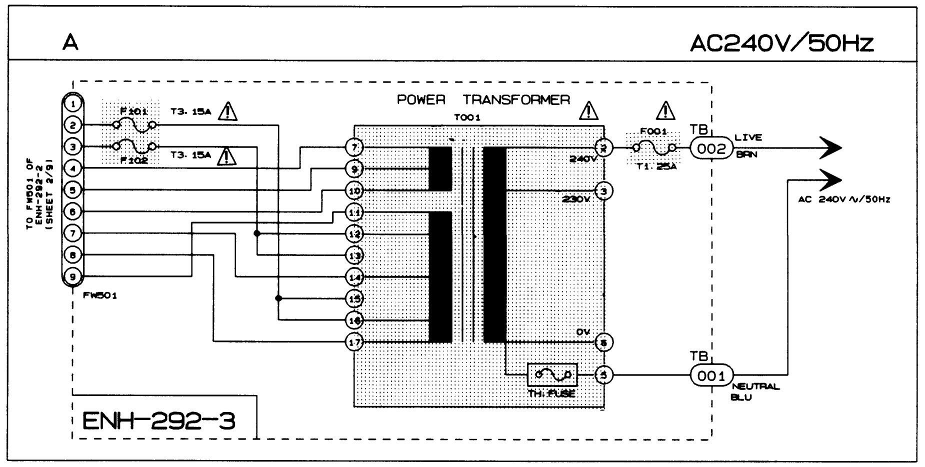
POWER SUPPLY BLOCK


U/UB/UC/US/UT
AC110/127/220/230 ~ 240V ~ 50/60Hz
POWER TRANSFORMER
T001
F101 T3.15A
F102 T3.15A
TO FW501 OF ENH-292-2 (SHEET 2/9)
FW501
128V
18V
0V
128V
110V
0V
TH. FUSE
006 BRN
009 GRY
003 YLW
004 ORG
005 RED
008 BLU
007 WHT
F003 T1.25A
F002 T2.5A
TB 002 LIVE BRN
TB 001 NEUTRAL BLU
AC 110/127/220/230 ~ 240V ~/50/60Hz
ENH-292-4
ENH-292-3
VOLTAGE SELECTOR LOCATION
AC110V
AC127V
AC220V
AC230-240V

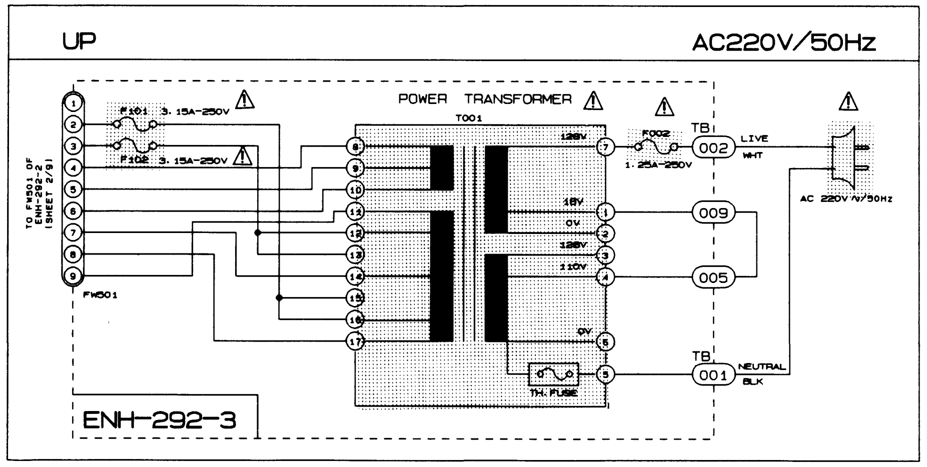
POWER SUPPLY BLOCK


EF/EN/G/GI/VX
AC230V/50Hz
POWER TRANSFORMER
T001
F101 T3.15A
F102 T3.15A
F001 T1.25A
TO FW501 OF ENH-292-2 (SHEET 2/9)
FW501
240V
230V
0V
TH. FUSE
TB 002 LIVE BRN
TB 001 NEUTRAL BLU
AC 230V ~/50Hz
ENH-292-3

POWER SUPPLY BLOCK

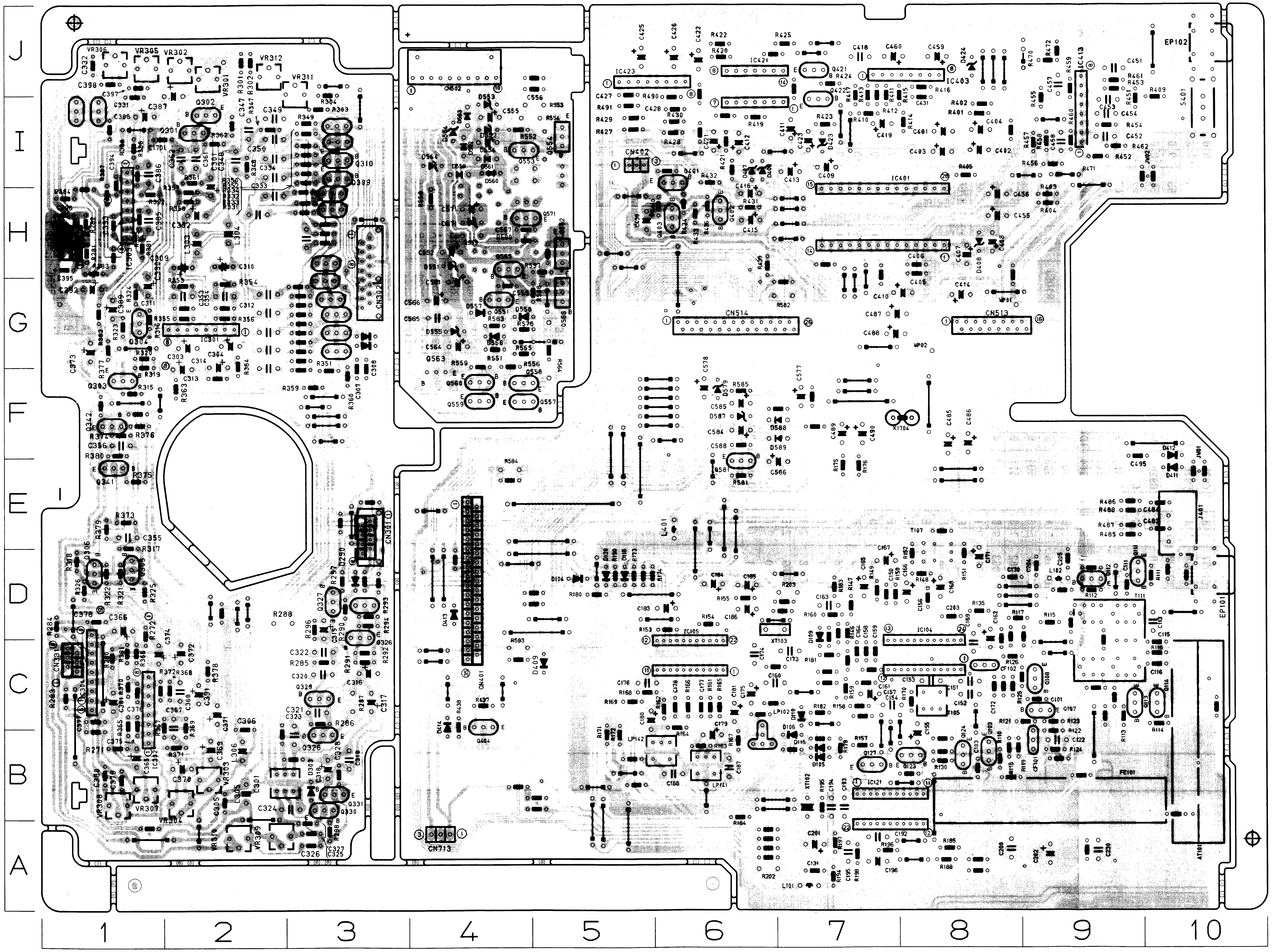

A
AC240V/50Hz
POWER TRANSFORMER
T001
F101 T3.15A
F102 T3.15A
F001 T1.25A
TO FW501 OF ENH-292-2 (SHEET 2/9)
FW501
240V
230V
0V
TH. FUSE
TB 002 LIVE BRN
TB 001 NEUTRAL BLU
AC 240V ~/50Hz
ENH-292-3

POWER SUPPLY BLOCK


UP
AC220V/50Hz
POWER TRANSFORMER
T001
F101 3.15A-250V
F102 3.15A-250V
F002 1.25A-250V
TO FW501 OF ENH-292-2 (SHEET 2/9)
FW501
128V
18V
0V
128V
110V
0V
TH. FUSE
TB 002 LIVE WHT
009
005
TB 001 NEUTRAL BLK
AC 220V ~/50Hz
ENH-292-3

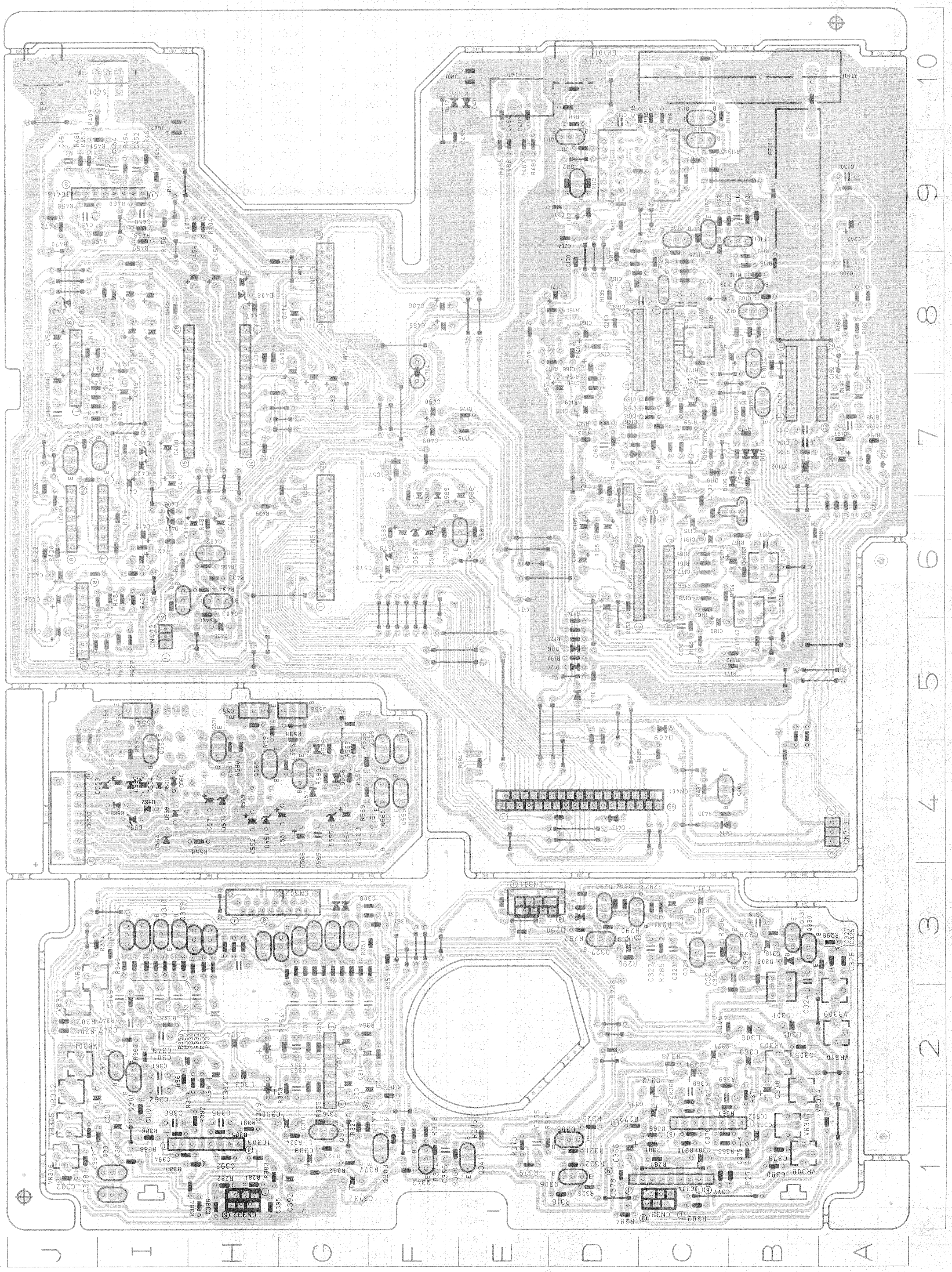
Printed Circuit Boards

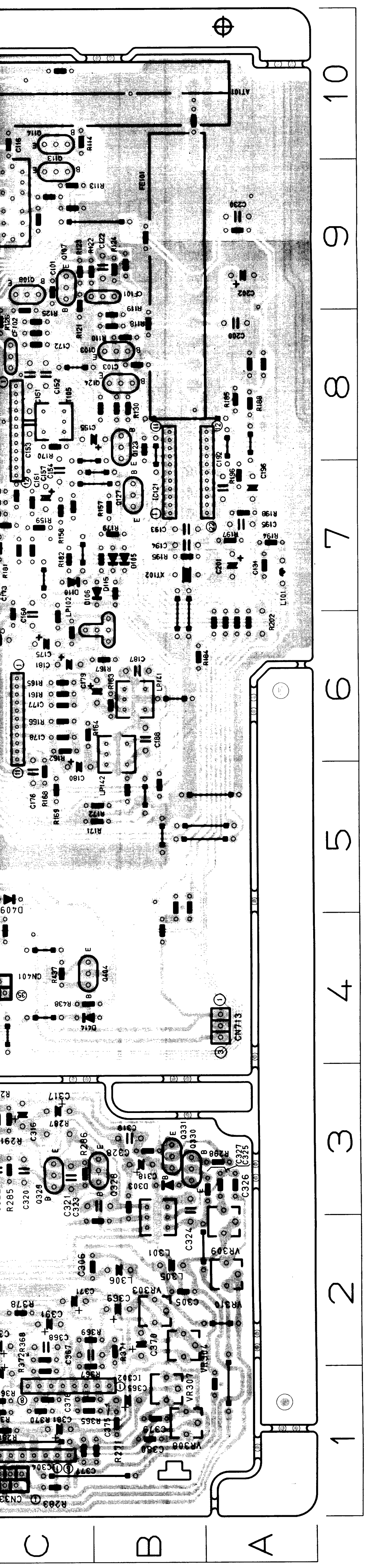
■ Deck / Tuner / Source Select P.C.Board (ENC - 132)


J
I
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
CN514
CN513
CN401
CN402
CN302
CN713
IC401
IC403
IC413
IC421
IC423
IC301
IC104
IC105
IC121
EP101
EP102
J401
S401
FE101
AT101
VR301
VR302
VR305
VR306
VR307
VR309
VR311
VR312

Printed Circuit Boards

■ Deck / Tuner / Source Select P.C.Board (ENC - 132)


10
9
8
7
6
5
4
3
2
1
J
I
H
G
F
E
D
C
B
A
CN514
CN513
CN301
CN302
CN331
CN332
CN401
CN402
CN713
EP101
EP102
IC401
IC403
IC421
IC423
IC301
IC303
IC302
IC304



Location List (ENC-132)

Symbol	X	Y
C101	9	C
C111	9	D
C113	10	D
C115	10	C
C116	10	C
C122	9	B
C131	7	A
C150	7	D
C151	8	C
C152	8	C
C153	8	C
C154	7	C
C155	8	B
C156	8	D
C157	7	C
C158	7	C
C159	7	C
C160	6	C
C161	7	C
C162	8	D
C163	7	D
C164	7	C
C165	7	D
C166	8	D
C167	7	D
C168	8	D
C169	8	D
C170	8	D
C1701	2	I
C171	8	D
C172	8	C
C173	7	C
C174	6	C
C175	6	C
C176	5	C
C177	6	C
C178	6	C
C179	6	B
C180	5	C
C181	6	C
C183	6	D
C184	6	D
C185	6	D
C186	6	D
C187	6	B
C188	6	B
C192	7	A
C193	7	B
C194	7	B
C195	7	A
C196	7	A
C200	8	A
C201	7	A
C202	9	A
C203	8	D
C204	9	D
C205	9	D
C230	9	A
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C302	2	H
C303	2	G
C304	2	G
C305	2	B
C306	2	B
C307	3	G
C308	3	F
C309	2	H
C310	2	H
C311	2	G
C312	2	G
C313	2	F
C314	2	G
C315	3	D
C316	3	C
C317	3	C

Symbol	X	Y
C318	3	B
C319	3	B
C320	3	C
C321	3	C
C322	3	C
C323	3	C
C324	2	B
C325	3	A
C326	3	A
C327	3	A
C328	3	B
C329	2	G
C330	3	H
C331	1	I
C332	1	J
C333	2	I
C334	2	I
C337	2	F
C338	2	G
C341	2	H
C342	2	H
C345	2	G
C346	2	G
C347	2	I
C348	2	I
C349	2	I
C350	2	I
C353	2	G
C354	2	G
C355	1	E
C356	1	F
C361	2	I
C362	2	I
C365	1	B
C366	1	D
C367	2	C
C368	2	C
C369	2	B
C370	2	B
C371	2	C
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C376	1	C
C377	1	C
C378	1	D
C379	1	B
C380	1	B
C381	1	C
C385	1	H
C386	1	I
C387	2	J
C388	1	I
C389	1	G
C390	1	H
C391	2	C
C392	1	G
C393	1	H
C394	1	I
C395	1	H
C396	1	H
C397	1	J
C398	1	J
C401	8	I
C402	8	I
C403	8	I
C404	8	I
C405	8	H
C406	8	H
C407	8	H
C409	7	I
C409	7	J
C410	7	G
C410	7	I

Symbol	X	Y
C411	7	I
C412	6	I
C413	7	I
C414	8	G
C415	6	H
C416	6	H
C421	6	I
C422	6	J
C423	7	I
C425	5	J
C426	6	J
C427	5	J
C428	6	I
C430	5	H
C431	8	I
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C452	9	I
C453	9	I
C454	9	I
C455	8	H
C456	8	H
C457	9	J
C458	9	I
C471	10	E
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C490	7	F
C495	10	F
C496	8	J
C497	8	J
C551	4	G
C552	4	H
C553	4	G
C554	4	I
C555	4	I
C556	4	J
C557	5	H
C564	4	G
C565	4	G
C566	4	G
C571	4	H
C577	7	F
C578	6	F
C584	6	F
C585	6	F
C586	6	E
C588	6	F
CF101	9	B
CF102	8	C
CN301	3	D
CN302	3	G
CN331	1	C
CN332	1	H
CN401	4	C
CN402	5	I
CN502	4	J
CN513	9	G
CN514	7	G
CN713	4	A
D104	5	D
D105	7	B
D106	7	B
D109	7	D
D110	7	C
D115	7	B
D116	5	D
D120	5	D
D290	3	D
D301	3	G
D302	3	G

Symbol	X	Y
D303	3	B
D406	6	I
D407	6	I
D408	8	H
D409	5	C
D411	10	E
D412	10	F
D413	4	D
D414	4	B
D423	7	I
D424	8	J
D551	4	H
D552	4	I
D553	4	I
D554	4	I
D555	4	G
D556	4	G
D557	4	G
D558	5	G
D559	4	I
D560	4	I
D561	4	I
D562	4	I
D563	4	I
D564	4	I
D571	4	H
D579	6	F
D587	6	F
D588	7	F
D589	7	F
FE101	9	B
IC104	8	C
IC105	6	C
IC121	7	B
IC301	2	G
IC302	1	B
IC303	1	I
IC304	1	D
IC401	8	H
IC403	7	J
IC413	9	I
IC421	7	I
IC423	5	J
J401	10	E
JW01	10	E
JW02	10	I
K1704	8	F
L101	7	A
L102	9	D
L301	2	B
L303	2	H
L304	2	H
L305	2	B
L306	2	B
LP102	6	C
LP141	6	B
LP142	6	B
Q103	8	B
Q107	9	C
Q108	9	C
Q111	9	D
Q112	9	D
Q113	9	C
Q114	10	C
Q123	8	B
Q124	8	B
Q127	7	B
Q301	2	I
Q302	2	I
Q303	1	F
Q304	1	G
Q305	1	D
Q306	1	D
Q307	3	G
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Symbol	X	Y
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Q404	4	C
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R116	10	C
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R118	8	B
R119	8	B
R121	9	C
R122	9	B
R123	9	C
R124	9	B
R125	8	C
R126	8	C
R130	8	B
R135	8	D
R146	7	D
R147	7	D
R148	8	D
R149	7	D
R150	7	D
R151	8	E
R152	8	E
R153	6	D
R154	6	D
R155	6	D
R157	7	B
R158	7	C
R159	7	C
R160	7	D
R161	6	C

Symbol	X	Y
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R163	6	B
R164	6	C
R165	6	C
R166	6	C
R167	6	B
R168	6	C
R169	5	C
R170	8	C
R171	5	C
R172	5	C
R173	5	D
R174	5	D
R175	7	E
R176	7	E
R179	7	B
R180	5	D
R181	7	C
R182	7	C
R183	7	D
R184	6	B
R185	8	A
R188	8	A
R190	5	D
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R197	7	A
R198	7	A
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R282	1	H
R283	1	C
R284	1	D
R285	3	C
R286	3	C
R287	3	C
R288	2	D
R290	3	D
R291	3	C
R292	3	C
R293	3	D
R294	3	D
R295	3	D
R296	3	C
R297	3	D
R298	3	A
R301	2	J
R302	2	J
R303	3	I
R304	3	J
R315	1	F
R316	1	G
R317	1	E
R318	1	D
R319	1	G
R320	1	G
R321	1	D
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R326	1	D
R327	3	G
R328	3	H
R329	3	G
R330	3	H
R331	3	I
R332	3	I
R333	3	I
R334	3	I

Symbol	X	Y
R335	3	F
R336	3	G
R337	3	G
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R340	3	H
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R385	1	H
R386	1	I
R387	1	I
R388	1	I
R391	1	H
R392	1	H
R401	8	I
R402	8	I
R403	9	H
R404	9	H
R405	8	I
R406	8	I
R409	10	I
R410	7	I
R411	7	I
R412	7	I
R413	7	J
R414	8	I
R415	8	I
R416	8	J
R417	7	I
R419	6	I
R420	6	J
R421	6	I
R422	6	J

Symbol	X	Y
R423	7	I
R424	7	J
R425	7	J
R427	5	I
R428	6	I
R429	5	I
R430	6	I
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R435	6	I
R436	6	H
R437	4	C
R438	4	B
R439	6	H
R440	6	H
R451	9	J
R452	9	I
R453	9	J
R454	9	I
R455	9	I
R456	9	I
R457	9	I
R458	9	I
R459	9	I
R460	9	I
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R490	6	I
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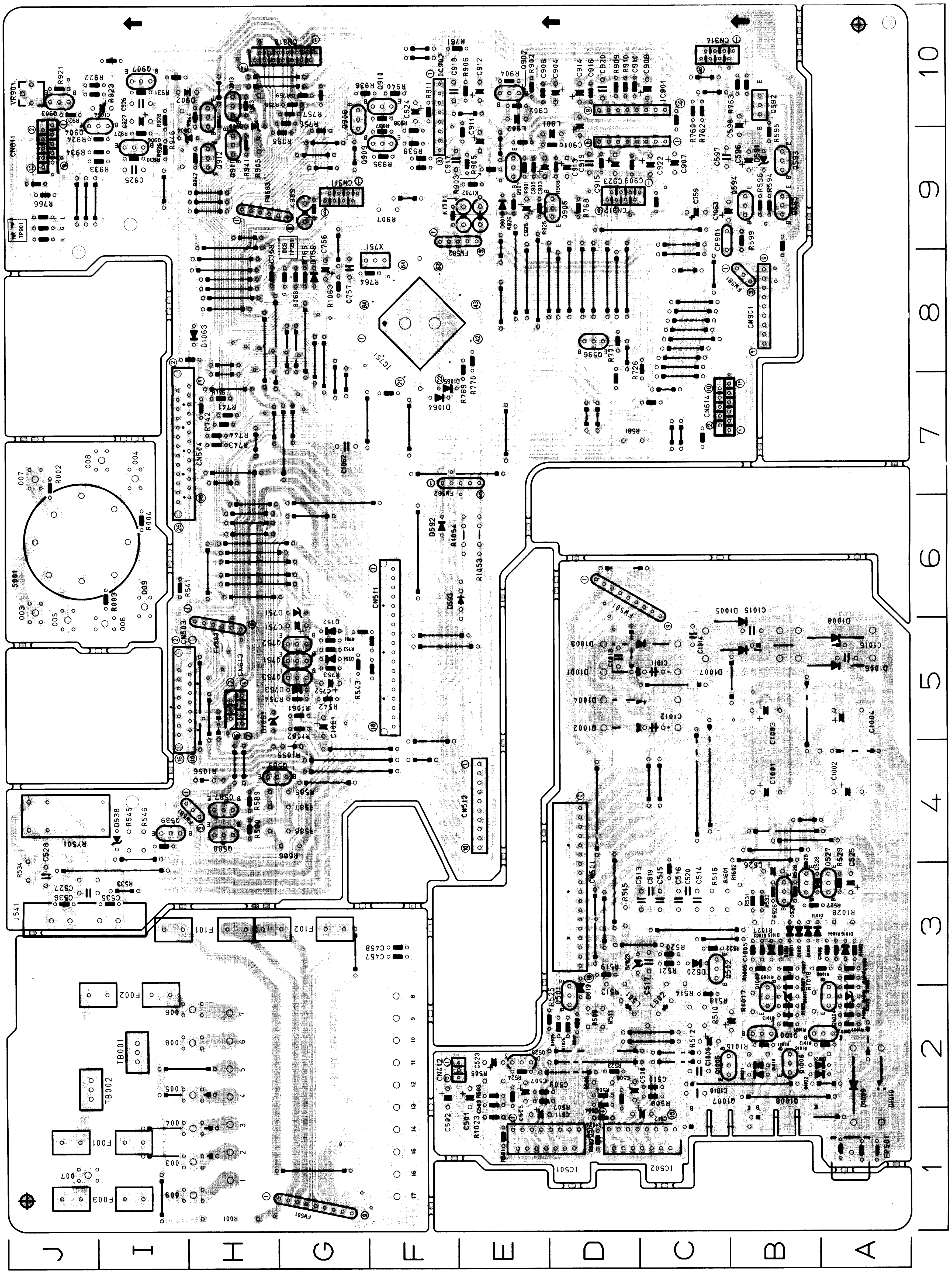
R551	4	G
R552	4	I
R553	5	I
R554	5	I
R555	5	G
R556	4	G
R557	5	G
R559	4	F
R563	4	G
R564	5	F
R576	5	G
R579	4	H
R580	4	H
R581	6	E
R582	7	G
R583	4	C
R584	4	E
R585	6	F
R597	5	H
R598	5	G
S401	10	I
T105	8	C
T107	8	D
T111	9	C
XT102	7	B
XT141	7	D

■ Deck / CD Control ,Power Supply P.C.Board (ENH - 292)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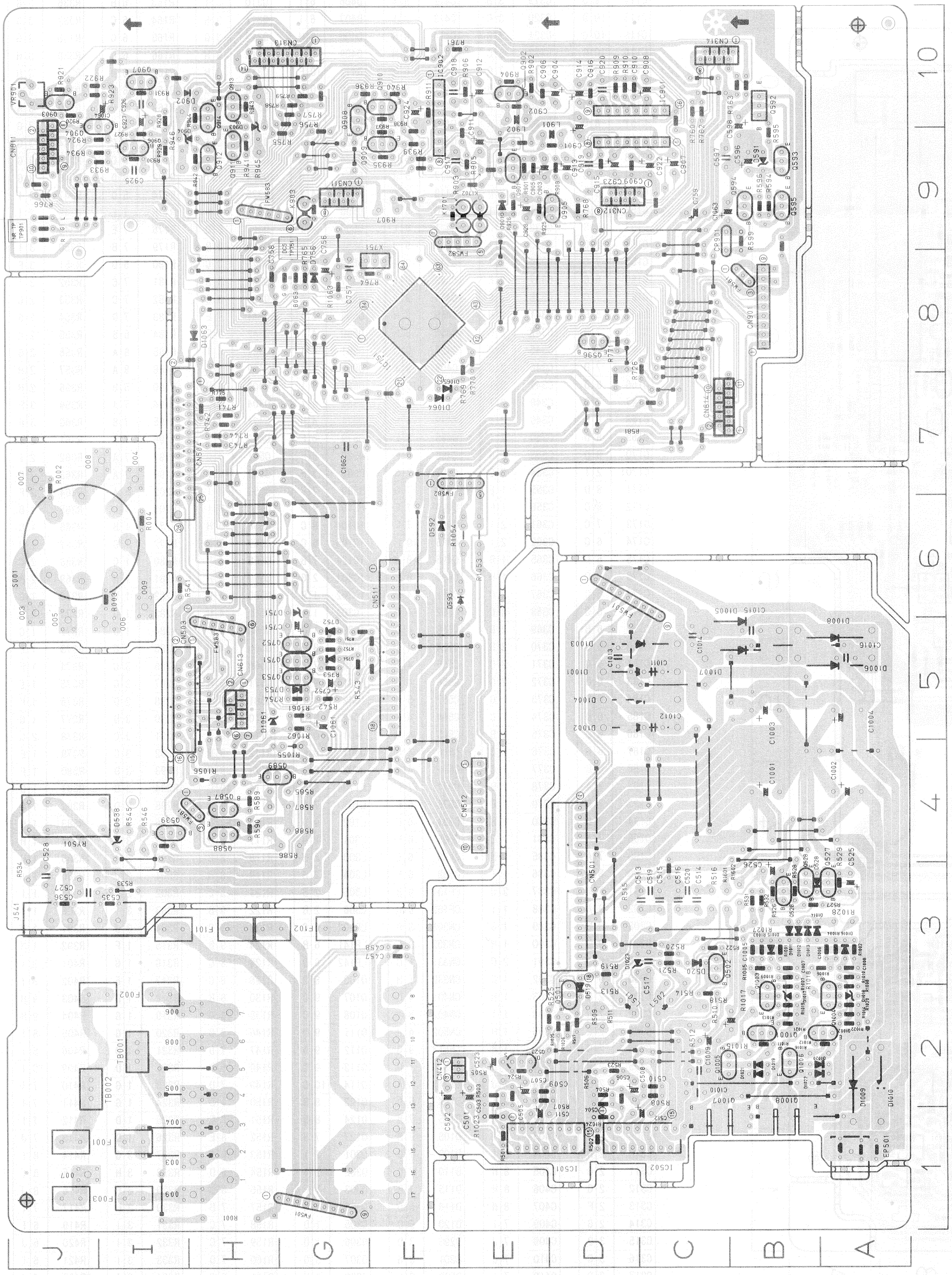
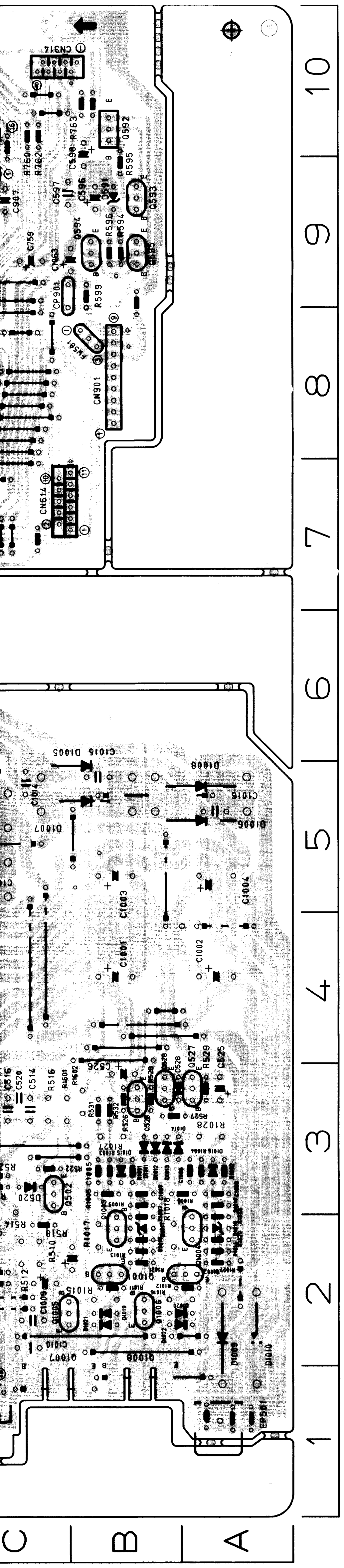
Deck / CD Control ,Power Supply P.C.Board (ENH - 292)





Location List (ENH-292)

Symbol	X	Y
C1001	4	B
C1002	4	A
C1003	5	B
C1004	5	A
C1005	3	B
C1006	3	A
C1007	3	B
C1008	3	A
C1009	2	C
C1010	2	C
C1011	5	C
C1012	5	C
C1013	5	D
C1014	5	C
C1015	5	B
C1016	5	A
C1061	5	G
C1062	7	G
C1063	9	B
C1064	10	I
C457	3	F
C458	3	F
C501	2	E
C502	2	F
C503	2	E
C504	2	D
C505	2	E
C506	2	D
C507	2	E
C508	2	D
C509	2	E
C510	2	C
C511	1	E
C512	1	D
C513	3	C
C514	3	C
C515	3	C
C516	3	C
C517	3	C
C519	3	C
C520	3	C
C523	2	E
C525	3	A
C526	3	B
C527	3	I
C528	3	J
C535	3	I
C536	3	J
C596	9	B
C597	9	C
C598	10	B
C751	5	G
C752	5	G
C756	8	G
C757	8	G
C758	8	H
C759	9	C
C901	9	D
C902	10	E
C903	9	E
C904	10	D
C905	9	E
C906	10	E
C907	9	C
C908	10	C
C909	9	D
C910	10	D
C911	9	E
C912	10	E
C913	9	D
C914	10	D
C915	9	D
C916	10	D
C917	9	E
C918	10	F
C919	9	D
C920	10	D
C921	9	D
C922	9	C
C923	9	D
C924	10	F
C925	9	I
C926	10	I
C927	10	I
C928	9	E
CN311	9	G
CN312	9	C
CN313	10	G
CN314	10	B
CN501	4	D
CN503	5	I
CN504	6	I
CN511	6	F
CN512	4	E
CN613	5	H
CN614	7	B
CN811	9	J
CN901	8	B
D1001	5	D
D1002	5	D
D1003	5	D
D1004	5	D
D1005	5	C
D1006	5	B
D1007	5	C
D1008	5	B
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D1010	2	A
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D1065	7	F
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D528	3	B
D538	4	I
D591	9	B
D592	6	F
D593	6	E
D751	6	G
D752	5	G
D753	5	G
D754	5	G
D756	8	G
D901	9	E
D902	10	I
D903	10	H
D904	9	H
F001	1	I
F002	2	I
F003	1	I
F102	3	H
FT101	3	H
FW501	1	G
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FW581B	8	B
FW582A	7	F
FW582B	9	F
FW901A	5	H
FW901B	9	H
IC501	1	E
IC502	1	D
IC751	8	F
IC901	9	C
IC902	10	F
J541	3	J
K1701	9	E
K1702	9	E
K903	9	G
L501	2	D
L502	2	C
L901	9	D
L902	10	E
PW001	1	A
PW002	4	A
Q1001	2	B
Q1002	2	B
Q1003	2	B
Q1004	2	A
Q1005	2	C
Q1006	2	B
Q1007	1	C
Q1008	1	B
Q501	2	D
Q502	3	C
Q523	2	E
Q526	3	B
Q527	3	A
Q528	3	B
Q539	4	I
Q587	4	H
Q588	4	H
Q589	4	G
Q592	10	B
Q593	9	B
Q594	9	B
Q595	9	B
Q596	8	D
Q751	5	G
Q752	5	G
Q753	5	G
Q901	9	E
Q902	10	E
Q903	10	J
Q904	10	I
Q905	9	D
Q906	9	I
Q907	10	I
Q908	10	G
Q909	9	F
Q910	10	F
Q911	9	H
Q912	9	H
Q913	10	H
Q914	10	H
R001	1	H
R002	6	J
R003	6	I
R004	6	I
R1001	3	B
R1002	3	A
R1003	3	B
R1004	3	A
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R1006	3	B
R1007	2	B
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R1014	2	A
R1015	2	B
R1016	2	B
R1017	2	B
R1018	2	B
R1019	2	B
R1020	2	A
R1021	2	B
R1022	2	A
R1023	1	E
R1024	1	D
R1025	2	D
R1027	3	B
R1028	3	A
R1053	6	E
R1054	6	E
R1055	4	G
R1056	4	H
R1061	5	G
R1062	5	G
R1063	8	G
R1601	3	C
R1602	3	B
R501	1	E
R502	1	D
R503	2	E
R504	2	D
R505	2	E
R506	2	D
R507	2	E
R508	2	C
R509	2	D
R510	2	C
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R512	2	C
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R514	3	C
R515	3	D
R516	3	C
R517	2	D
R518	2	C
R519	3	D
R520	3	C
R521	3	C
R522	3	C
R523	2	D
R524	2	E
R525	2	D
R526	3	B
R527	3	A
R528	3	B
R529	3	A
R531	3	B
R532	3	B
R533	3	J
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R541	6	I
R542	5	G
R543	5	G
R545	4	I
R546	4	I
R581	7	C
R585	4	H
R586	4	G
R587	4	H
R588	4	H
R589	4	H
R590	4	H
R591	8	D
R594	9	B
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R726	8	C
R741	7	H
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R751	5	G
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R754	5	G
R755	9	G
R756	10	G
R757	10	G
R758	10	G
R759	10	G
R760	10	C
R761	10	E
R762	10	C
R763	10	B
R764	8	F
R765	8	G
R766	9	J
R768	9	D
R769	7	E
R770	8	E
R771	8	D
R775	7	H
R901	9	E
R902	10	E
R903	9	E
R904	10	E
R905	9	E
R906	10	E
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R908	9	D
R909	10	D
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R911	10	F
R920	10	J
R921	10	J
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R923	10	J
R924	9	I
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R926	9	E
R927	9	I
R928	10	I
R929	9	I
R930	9	I
R931	10	I
R933	9	J
R934	9	J
R935	9	F
R936	10	F
R937	9	F
R938	10	F
R939	9	F
R940	10	F
R941	9	H
R942	9	H
R943	10	H
R944	10	H
R945	9	H
R946	9	I
RY501	4	I
S001	6	J
TB001	2	I
TB002	2	J
X751	8	G
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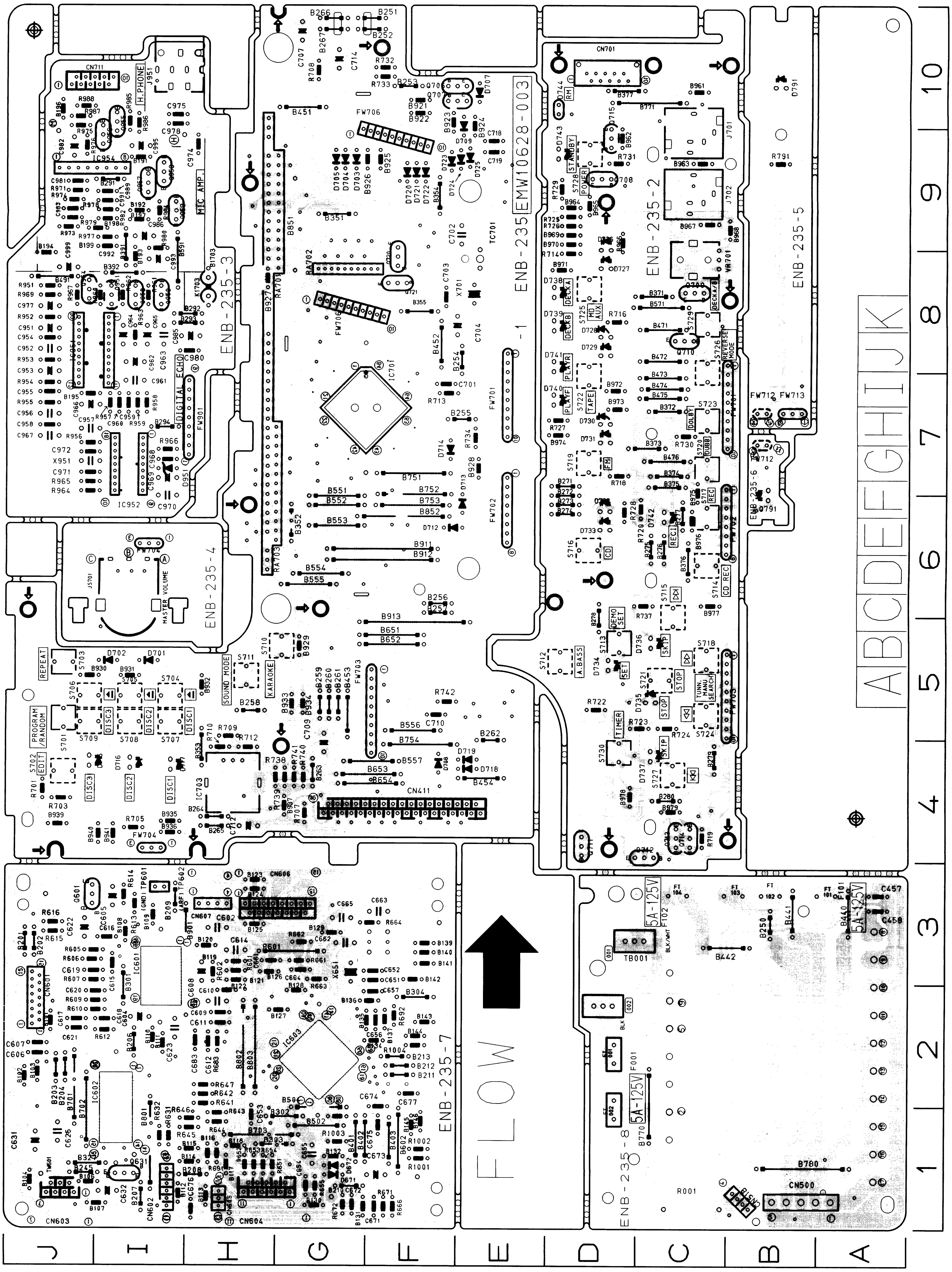
■ CD / Front P.C.Board (ENB - 235)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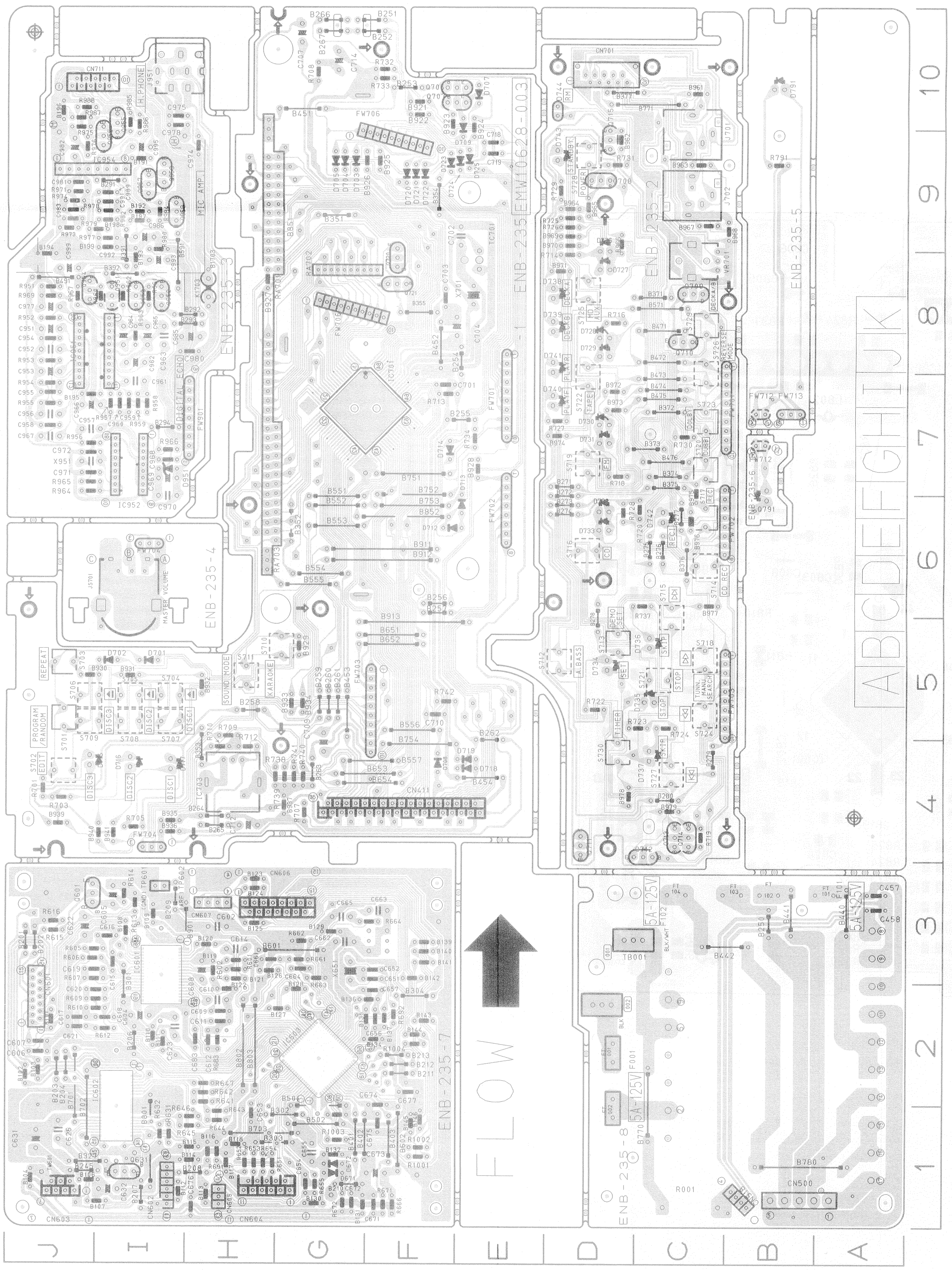
CN607
IC701
IC703
IC601
IC602
IC603
IC952
IC954
H.PHONE
MIC AMP
DIGITAL ECHO
MASTER VOLUME
STANDBY
POWER
DECKA
DECKB
PLAYR
PLAYF
TAPE
FM
CD
REC
CD REC
DOLBY
DUBB
REVERSE MODE
DEMO SET
A.BASS
SET
STOP
TUNN. MANU. SEARCH
TIMER
SKIP
REPEAT
PROGRAM /RANDOM
EDIT
DISC1
DISC2
DISC3
SOUND MODE
KARAOKE
MD AUX
5A-125V
TB001

■ CD / Front P.C.Board (ENB - 235)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ENB-235-2
ENB-235-3
ENB-235-4
ENB-235-5
ENB-235-6
ENB-235-7
ENB-235-8
FLOW
H.PHONE
MIC AMP
DIGITAL ECHO
MASTER VOLUME
5A-125V
CN711
CN701
CN411
CN500
CN603
CN604
IC701
IC952
TB001
A
B
C
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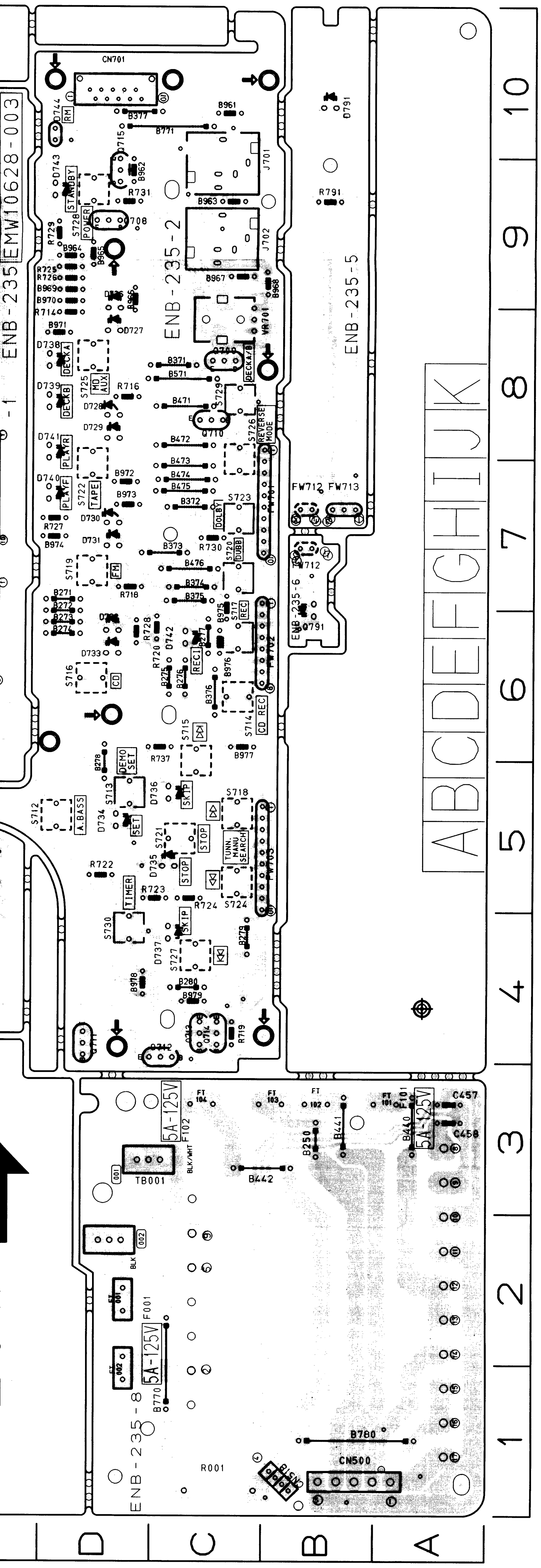
ENB-235 EMW10628-003
ENB-235-2
ENB-235-5
ENB-235-6
ENB-235-8
CN701
CN500
TB001
J701
J702
FW712 FW713
STANDBY
POWER
DECKA
DECKB
MD AUX
PLAYR
PLAYF
TAPE
FM
CD
REC
CD REC
DEMO SET
A.BASS
SET
SKIP
STOP
TUNN MANU SEARCH
TIMER
DOLBY
DUBB
REVERSE MODE
DECKA/B
RM
5A-125V
F001
F101
F102
B780
R001
C457
C458
A B C D E F G H I J K
1 2 3 4 5 6 7 8 9 10

Location List (ENB-235)

Symbol	X	Y
C457	3	A
C458	3	A
C602	3	H
C604	2	I
C605	3	I
C606	2	J
C607	2	J
C608	3	H
C609	2	H
C610	2	H
C611	2	H
C612	2	H
C614	3	H
C615	3	I
C616	3	I
C617	2	J
C618	2	I
C619	3	J
C620	2	J
C621	2	J
C622	3	J
C623	2	I
C625	1	J
C631	1	J
C632	1	I
C651	3	G
C652	3	G
C653	1	H
C654	1	G
C655	1	G
C656	2	F
C657	2	G
C661	3	H
C662	3	G
C663	3	F
C664	3	G
C665	3	G
C671	1	F
C672	1	G
C673	1	F
C674	1	F
C675	1	F
C676	1	H
C677	2	F
C683	2	H
C701	7	F
C702	9	E
C703	8	F
C704	8	F
C707	10	G
C709	4	G
C710	5	F
C712	4	H
C714	10	G
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C719	9	E
C951	8	J
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C955	7	J
C956	7	J
C957	7	J
C958	7	J
C959	7	I
C960	7	I
C961	7	I
C962	8	I
C963	8	I
C964	8	I
C965	8	I
C966	7	J
C967	7	J
C968	7	I
C969	7	I
C970	6	I
C971	7	I

Symbol	X	Y
C972	7	I
C974	9	H
C975	10	I
C976	8	J
C977	8	J
C978	10	I
C980	8	I
C981	9	J
C982	9	J
C983	9	J
C985	8	I
C986	9	I
C989	9	I
C991	9	I
C992	9	I
C993	8	I
C999	9	I
CN411	4	E
CN500	1	A
CN518	1	B
CN601	3	J
CN602	1	I
CN603	1	J
CN604	1	G
CN605	1	H
CN606	3	H
CN607	3	H
CN701	10	D
CN711	10	J
D671	1	G
D672	1	G
D701	5	I
D702	5	I
D703	9	G
D704	9	G
D705	9	G
D707	10	E
D708	4	F
D709	10	E
D712	6	E
D713	6	E
D714	7	F
D715	4	J
D716	4	I
D717	4	I
D718	4	E
D719	4	E
D720	9	F
D721	9	F
D722	9	F
D723	9	F
D724	9	E
D725	9	E
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D736	5	C
D737	4	C
D738	8	D
D739	8	D
D740	7	D
D741	8	D
D742	6	C
D743	9	D
D744	10	D
D791	10	B
D951	7	I
F001	2	D
F101	3	A
F102	3	B

Symbol	X	Y
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FW702	7	C
FW703	5	C
FW704A	6	I
FW704B	4	I
FW712	7	B
FW713	7	B
FW901	7	H
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IC602	1	I
IC603	2	G
IC701	7	G
IC703	4	H
IC951	8	I
IC952	7	I
IC954	9	J
J701	9	C
J702	9	C
J951	10	I
JP951	9	I
JS701	6	I
K1703	8	H
Q601	3	J
Q631	1	I
Q706	10	F
Q707	10	F
Q708	9	D
Q709	8	C
Q710	8	C
Q711	4	D
Q712	4	C
Q713	4	C
Q714	4	C
Q715	9	D
Q720	8	F
Q721	8	F
Q791	6	B
Q951	8	I
Q952	8	I
Q953	8	I
Q954	8	J
Q955	9	I
Q956	9	I
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R642	2	H
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R644	1	H
R645	1	I
R646	1	I
R647	2	H
R651	1	H
R652	1	H
R653	1	H
R654	1	H
R655	1	G

Symbol	X	Y
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R662	3	G
R663	3	G
R664	3	G
R666	1	F
R671	1	F
R672	1	G
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R691	1	H
R692	2	F
R701	4	J
R703	4	J
R705	4	I
R707	4	G
R708	10	G
R709	5	H
R710	4	H
R712	4	H
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R725	9	D
R726	9	D
R727	7	D
R729	6	D
R730	9	D
R731	9	D
R732	10	F
R733	10	F
R734	7	E
R737	6	C
R738	4	G
R739	4	H
R740	4	G
R741	4	G
R742	5	F
R791	9	B
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R955	7	J
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R979	9	J
R980	9	I
R982	9	I
R984	9	I
R985	10	I
R986	10	I
R987	10	J
R988	10	J

Symbol	X	Y
RA701	8	G
RA702	8	F
RA703	6	H
S701	5	J
S702	4	J
S703	5	J
S704	5	I
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S706	5	J
S707	5	I
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S711	5	H
S712	5	D
S713	5	D
S714	6	C
S715	5	C
S716	6	D
S717	6	C
S718	5	C
S719	7	D
S720	7	C
S721	5	C
S722	7	D
S723	7	C
S724	5	C
S725	8	D
S726	7	C
S727	4	C
S728	9	D
S729	8	C
S730	4	D
TB001	3	D
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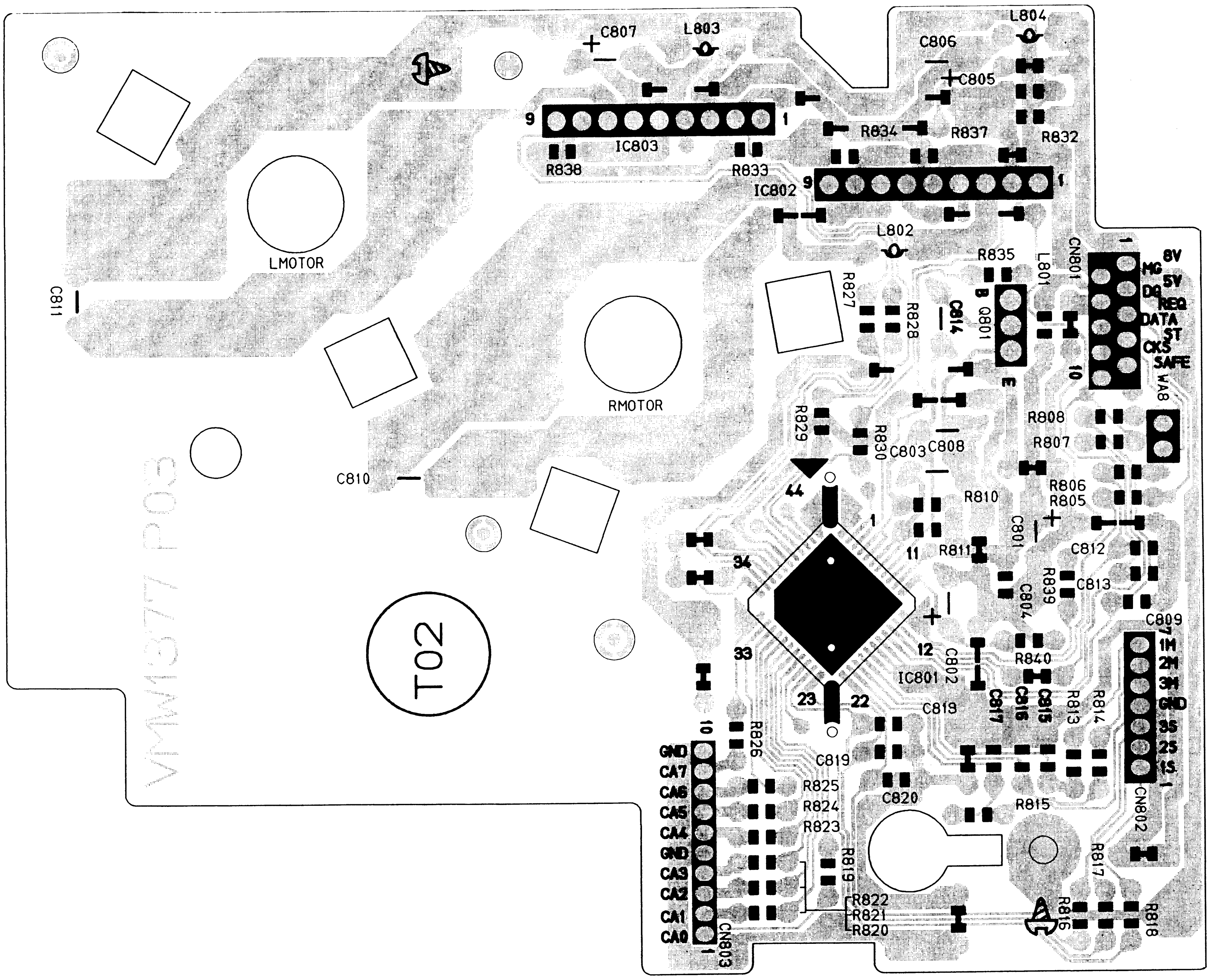
X951	7	J

■ CD Changer Control P.C.Board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L803
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C805
IC803
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R837
R832
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R833
IC802
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R835
L801
CN801
8V
MG
5V
DG
REQ
DATA
ST
CKS
SAFE
WA8
LMOTOR
C811
R827
R828
C814
Q801
B
E
RMOTOR
R829
R830
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C808
R808
R807
C810
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R806
R805
C801
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C812
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R839
C813
C804
C809
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12
C802
R840
IC801
C817
C816
C815
R813
R814
1H
2H
3H
GND
3S
2S
1S
23
22
C818
R826
C819
GND
CA7
CA6
CA5
CA4
GND
CA3
CA2
CA1
CA0
R825
R824
R823
C820
R815
CN802
R819
R822
R821
R820
R817
R816
R818
CN803
T02
VMW1377 P06

PARTS LIST

※ All printed circuit boards and its assemblies are not available as service parts.

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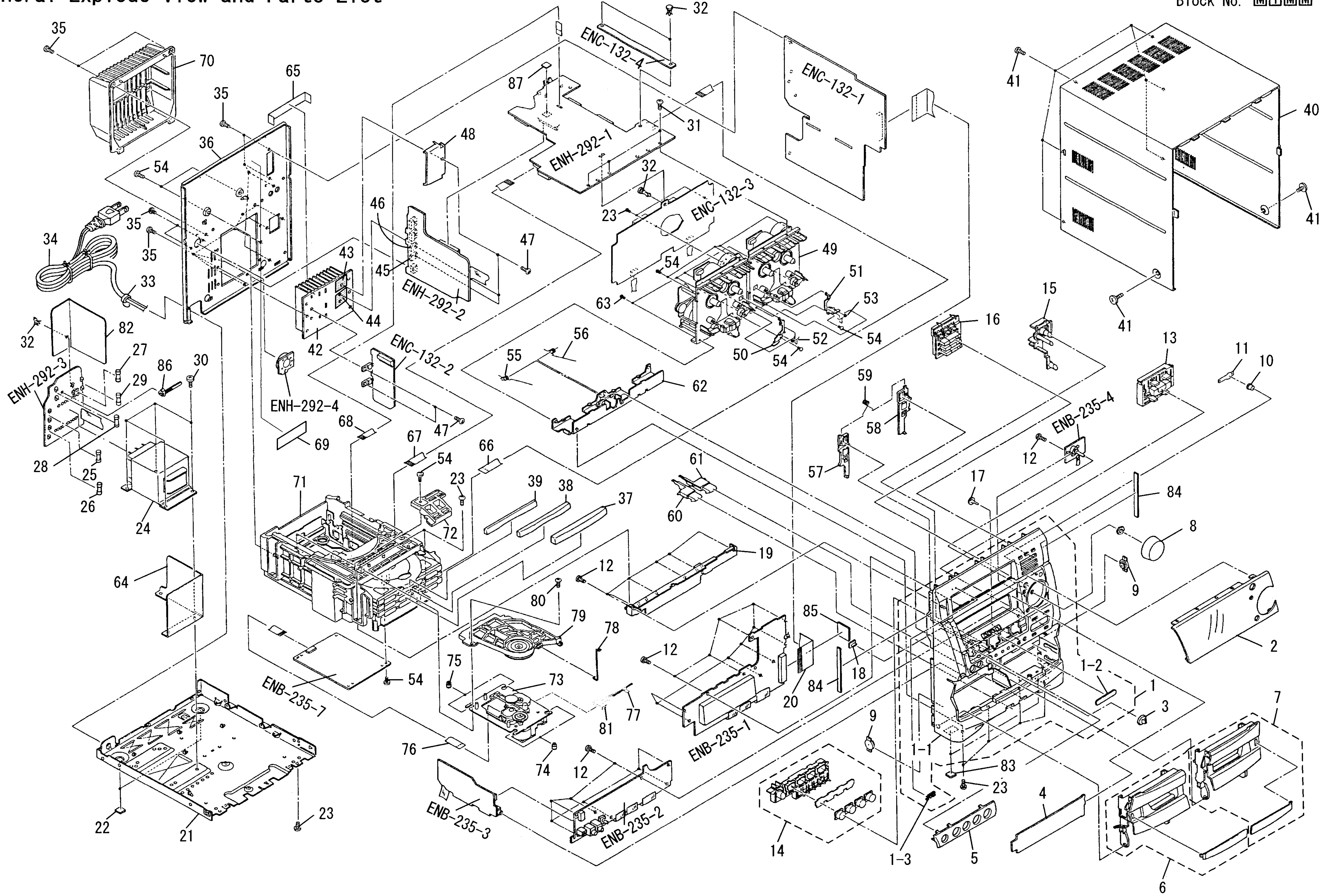
General Explode View and Parts List

Block No. M1MM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ENH-292-3
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ENC-132-4
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ENH-292-1
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ENC-132-3
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ENH-292-2
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ENC-132-2
ENH-292-4
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2
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79
78
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73
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81
74
76
ENB-235-7
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12
ENB-235-1
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84
18
1-2
1
3
7
12
ENB-235-3
ENB-235-2
14
9
1-1
83
23
1-3
5
4
6

■ Parts List

Block No. M1MM

⚠	Item	Parts Number	Parts Name	Q'ty	Description	Area
	1	EFP-CAD5TE(S)	FRONT PANEL ASS'Y	1		A BS EF EN G GI VX
		EFP-CAD5TU(S)	FRONT PANEL ASS'Y	1		U UB UP US UT
	1-1	E103052-011SM	FRONT PANEL	1		U UB UP US UT
		E103052-015SM	FRONT PANEL	1		A BS EF EN G GI VX
	1-2	E309487-001SM	INDICATOR PLATE	1		
	1-3	E406971-221	JVC MARK	1		
	2	E208574-007SM	WINDOW SCREEN	1		A BS EF EN G GI VX
		E208574-008SM	WINDOW SCREEN	1		U UB UP US UT
	3	E408765-004SM	MIC.KNOB	1		U UB UP US UT
	4	E309489-001	FL SCREEN	1		
	5	E208576-001	ORNAMENT	1		
	6	E208758-001SM	CASSETTE HOLDER ASSY	1	A	
	7	E208759-001SM	CASSETTE HOLDER ASSY	1	B	
	8	E309501-001	MAIN VOL.KNOB	1		
	9	VYH7779-00B	DAMPER	2		
	10	E408733-001SM	REMOTE CONTROL WINDOW	1		
	11	E408937-001SM	REMOTE CONTROL SCREEN	1		
	12	SDSF2608Z	SCREW	23		
	13	E208582-003	PUSH BUTTON	1	STOP	
	14	E208757-002SM	PUSH BUTTON ASSY	1	AUX, TAPE, FM/AM, CD, REC/POWER	
	15	E208587-001	PUSH BUTTON	1	BASS	
	16	E208578-001	PUSH BUTTON	1	3CD	
	17	E408760-001SM	INDICATOR LENS	1	REC	
	18	E408759-001SM	POWER INDICATOR	1		
	19	E309495-002SM	STAY BRACKET	1		
	20	VWF1235-12TTBW	FLAT WIRE ASSY	1		
	21	E102616-230SM	CHASSIS BASE	1		
	22	E75896-006	FELT SPACER	2		
	23	SBSG3008Z	TAPPING SCREW	9		
⚠	24	ETP1100-67EAJ	POWER TRANSFORMER	1		A EF EN G GI VX BS
⚠		ETP1100-67FAJ	POWER TRANSFORMER	1		U UB UP US UT
⚠	25	QMF51E2-3R1	FUSE	1	F101	BS
⚠		QMF51E2-3R15J1	FUSE	1	F101	A EF EN G GI U UB UP US UT VX
⚠	26	QMF51E2-3R1	FUSE	1	F102	BS
⚠		QMF51E2-3R15J1	FUSE	1	F102	A EF EN G GI U UB UP US UT VX
⚠	27	QMF51E2-1R2J1BS	FUSE	1	F001	BS
⚠		QMF51E2-1R25	FUSE	1	F001	A EF EN G GI VX
⚠	28	QMF51E2-1R25	FUSE	1	F002	UP
⚠		QMF51E2-2R5J1	FUSE	1	F002	U UB US UT
⚠	29	QMF51E2-1R25	FUSE	1	F003	U UB US UT
	30	E65389-002	SPECIAL SCREW	4		
	31	SBST2604Z	SCREW	3		
	32	FMYH4004-001	RIVET	4		
⚠	33	QHS3876-162	CORD STOPPER	1		
⚠	34	EMP7000-200	POWER CORD	1		UP
⚠		QMP25F0-244	POWER CORD	1		A
⚠		QMP39E0-200	POWER CORD	1		EF EN G GI US VX
⚠		QMP5530-0085BS	POWER CORD	1		BS UB
⚠		QMP7520-200	POWER CORD	1		U UT
	35	E73273-003	SPECIAL SCREW	12		A BS EF EN G GI UP VX
		E73273-003	SPECIAL SCREW	14		U UB US UT
	36	E103054-018SM	REAR PANEL	1		U UB US UT
		E103054-019SM	REAR PANEL	1		BS EF EN G GI
		E103054-020SM	REAR PANEL	1		A
		E103054-021SM	REAR PANEL	1		UP
		E103054-033SM	REAR PANEL	1		VX
	37	E208593-006SM	CD FITTING	1		
	38	E208595-006SM	CD FITTING	1		

⚠	Item	Parts Number	Parts Name	Q'ty	Description	Area
	39	E208597-006SM	CD FITTING	1		
	40	E103056-002	METAL COVER	1		G GI
		FMKL1003-002(S)	METAL COVER	1		A BS EF EN U UB UP US UT VX
	41	SDSG3006M	TAPPING SCREW	8		
	42	FMMH3003-006	HEAT SINK	1		
	43	FMPK4003-001	MICA SHEET	1		
	44	FMPK4004-001	MICA SHEET	1		
	45	2SA1490LC(O,Y)	SI.TRANSISTOR	1	Q1008	
	46	2SC3854LC(O,Y)	SI.TRANSISTOR	1	Q1007	
	47	SBSG3014CC	SCREW	5		
	48	FMKL4007-001	HEAT SINK BRACKET	1		
	49	----------	NY-NEXT(W)MECHA	1		
	50	E309477-222	EJECT SAFETY	1		
	51	E309478-222	EJECT SAFETY	1		
	52	E407801-002	SPRING	1		
	53	E407802-002	SPRING	1		
	54	SBSF3008Z	TAPPING SCREW	10		
	55	E408933-001	HOLDER SPRING	1		
	56	E408934-001	HOLDER SPRING	1		
	57	E309479-001SS	EJECT LEVER	1		
	58	E309480-001SS	EJECT LEVER	1		
	59	E408742-001SS	SPRING	1		
	60	E309496-001	EJECT BUTTOM	1		
	61	E309497-001	EJECT BUTTOM	1		
	62	E208588-001	HOLDER BRACKET	1		
	63	SBST3006Z	TAPPING SCREW	4		
	64	E409015-001SM	SHIELD PLATE	1		
	65	FMYSA110-001KP	SPACER	1		
	66	VWF1210-30TTB	FLAT WIRE ASS'Y	1	CD to CN801	
	67	VWF1211-22TTBV	FLAT WIRE ASS'Y	1	CD to CN604	
	68	VWF1207-20TTB	FLAT WIRE ASS'Y	1	CD to CN603	
⚠	69	E406709-001	CAUTION LABEL	1	LASER CAUTION	
	70	E207356-001SM	REAR COVER	1		
	71	----------	CHANGER MECHANISM	1		
	72	E309662-001	DISC STOPPER	1		
	73	----------	CD MECHANISM	1		
	74	FMYH4003-001	INSULATOR	2		
	75	FMYH4003-002	INSULATOR	2		
	76	VWF1015-09TTAV	FLAT WIRE ASS'Y	1		
	77	VYSA1R2-033	SPACER	1		
	78	VKW5187-001	ROD	1		
	79	VKS3703-00DMM	CLAMPER ASS'Y	1		
	80	SPST2606Z	TAPPING SCREW	1		
	81	VDM1001-001A	WIRE&TUBE	1		
	82	E409190-221SM	PROTECT SHEET	1		
	83	E75896-002	SPACER	2		
	84	E306805-174	SPACER	2		
	85	FMYSA1R2-001	SPACER	1		
	86	E307572-001	FASTENER	1		
	87	E3400-431	FELT SPACER	1		
	-	E407619-057	FTZ LABEL	1		G
		E408843-001	APROVAL LABEL	1		EN
		E70891-001	CLASS1 LABEL	1		
		E75040-066	GI LABEL	1		GI
		E75139-003	Z LABEL	1		U
		QZL1031-101	LABEL	1		EF
		E408919-001	BEAB LABEL	1		BS
		E309384-018	RATING LABEL	1		

Changer Mechanism Ass'y and Parts List

■ Grease Point

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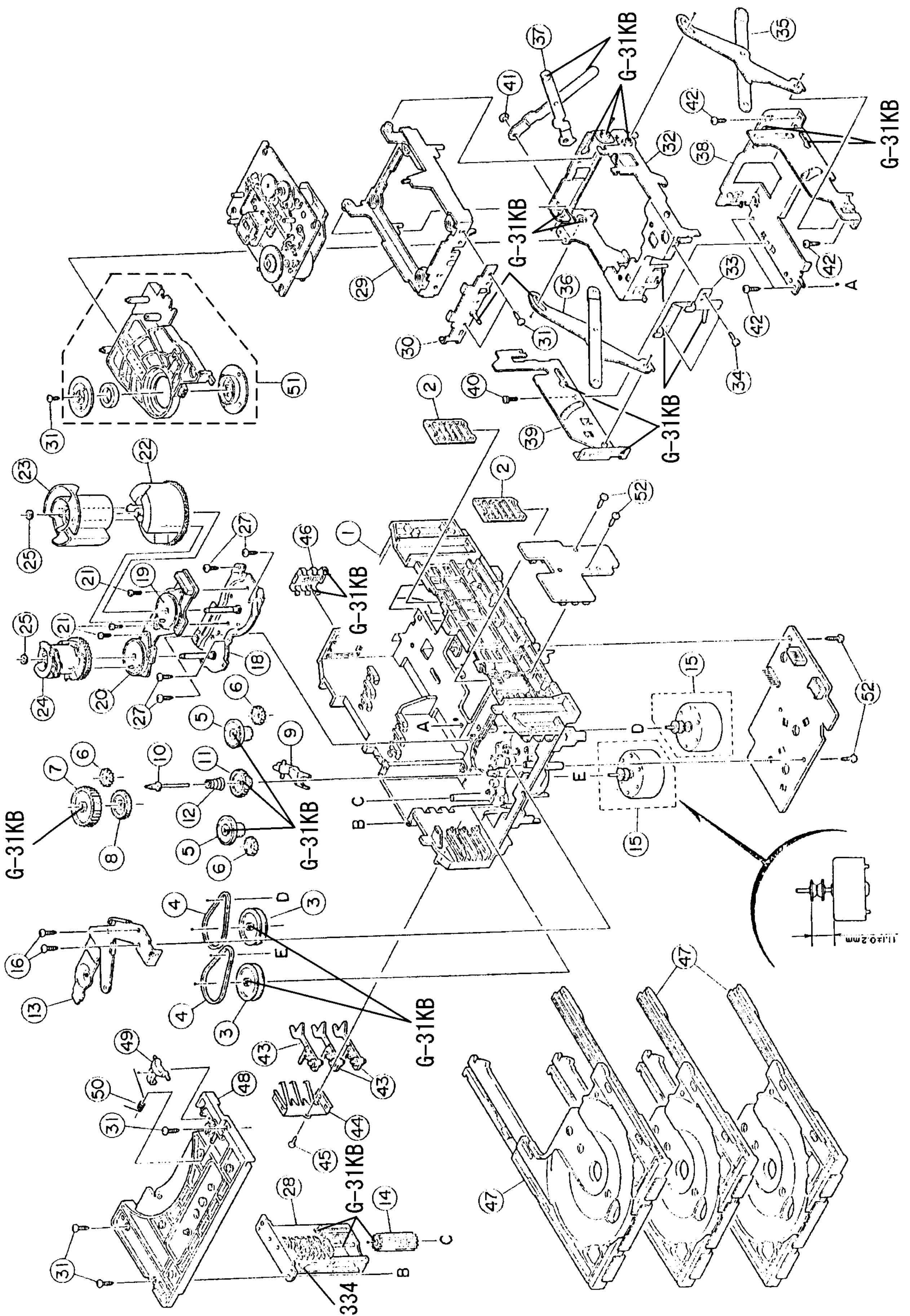
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1.1±0.2mm

■ Parts List (Changer Mechanism Ass'y)

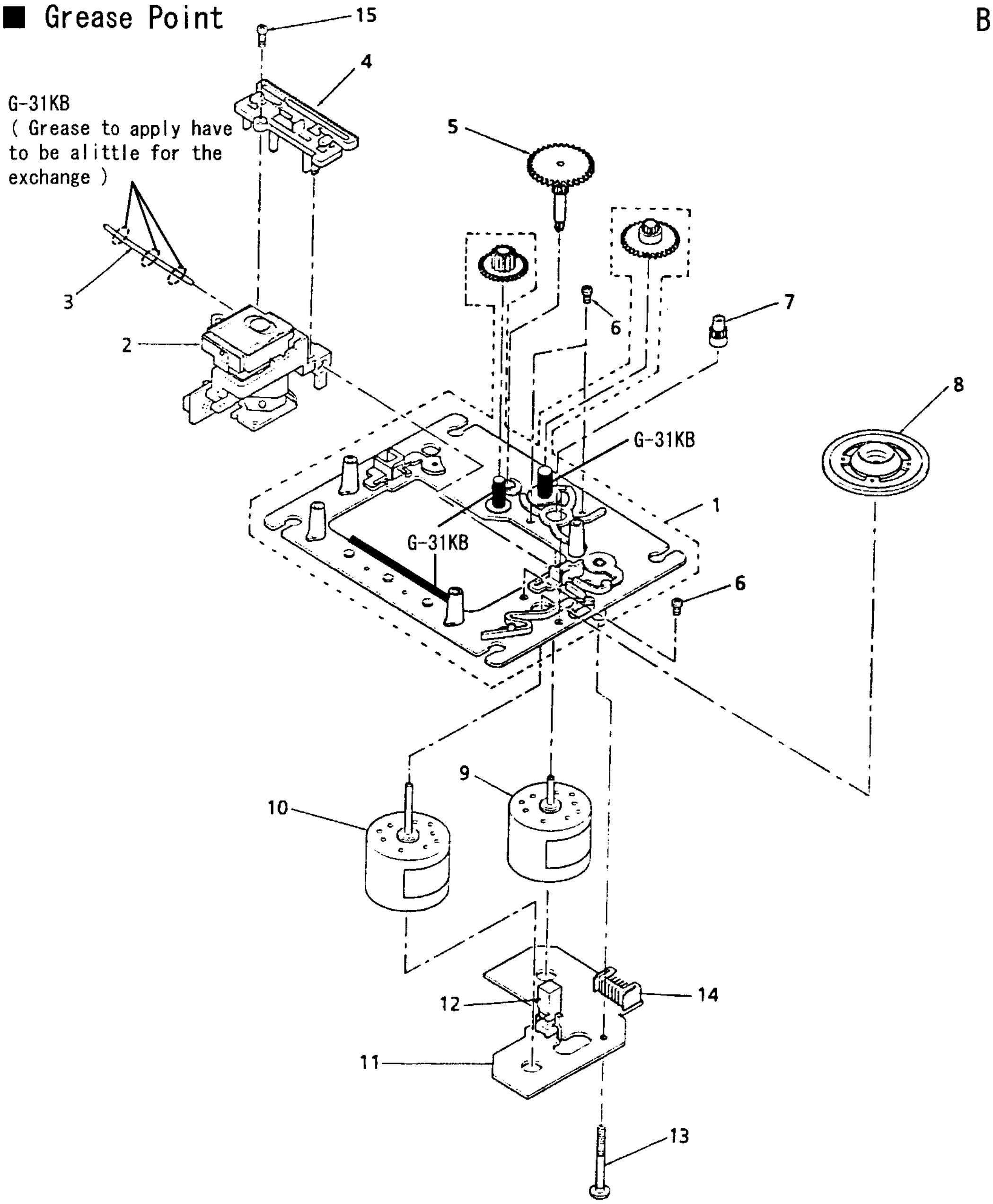
Block No. M2MM

⚠	Item	Parts Number	Parts Name	Q'ty	Description	Area
	1	VKS1144-003	CHASSIS BASE	1		
	2	VKS3698-003	TRAY GUIDE	2		
	3	VKS5532-003	PULLEY GEAR	2		
	4	VKB3000-164	DRIVE BELT	2		
	5	VKS5505-003	GEAR B	2		
	6	VKS5506-002	GEAR C	3		
	7	VKS5507-002	CROSS GEAR U	1		
	8	VKS5508-002	CROSS GEAR L	1		
	9	VKS5510-003	SELECT LEVER	1		
	10	VKH5769-001	GEAR STUD	1		
	11	VKS5511-002	SELECT GEAR	1		
	12	VKW5155-003	COMPRESS SPRING	1		
	13	VKM3846-002	GEAR BRACKET	1		
	14	VKS5509-002MM	CYLINDER GEAR	1		
	15	MSN5D257A-SA2	DC MOTOR	1		
	16	DPSP2616Z	SCREW	2		
	19	VKZ3172-00AMM	CAM SW. R ASS'Y	1		
	20	VKZ3173-00AMM	CAM SW. L ASS'Y	1		
	21	SPST2606Z	TAPPING SCREW	1		
	22	VKS2263-002MM	CAM R1	1		
	23	VKS2264-002MM	CAM R2	1		
	24	VKS2265-002MM	CAM GEAR L	1		
	25	WDL316050MM	SLIT WASHER	2		
	27	SBSF2608Z	TAPPING SCREW	4		
	28	VKS3702-00FMM	DRIVE UNIT	1		
	29	VKS2247-003	MECHA HOLDER A	1		
	30	VKL7767-00B	MECHABRACKET	1		
	31	SBSF2606Z	TAPPING SCREW	2		
	33	VKL7802-00C	MECHA HOLDER	1		
	34	SDST2604Z	SCREW	2		
	35	VKL7810-00A	LIFTER	1		
	36	VKL7811-00A	LIFTER	1		
	37	VKL7812-00A	LIFTER	1		
	38	VKL2732-002	LIFTER BASE	1		
	39	VKM3823-001	LIFTER BRACKET	1		
	40	SDST2604Z	SCREW	1		
	41	WDL266035-2	SLIT WASHER	1		
	42	SBSF2608Z	TAPPING SCREW	8		
	43	VKS5514-002MM	LOCK LEVER	3		
	44	VKY3133-002MM	RETURN SPRING	1		
	46	VKY3134-003MM	CLICK SPRING	1		
	47	VKS2252-00CMM	TRAY ASS'Y	3		
	48	VKS2250-003	TOP BRACKET	1		
	49	VKS5515-002	S.TRAY STOPPER	1		
	50	VKW5156-004	TORSION SPRING	1		
	51	----------	CLAMPER ASS'Y	1	See page 2-2	

CD Mechanism Ass'y and Pars List

■ Grease Point

Block No. M4MM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G-31KB
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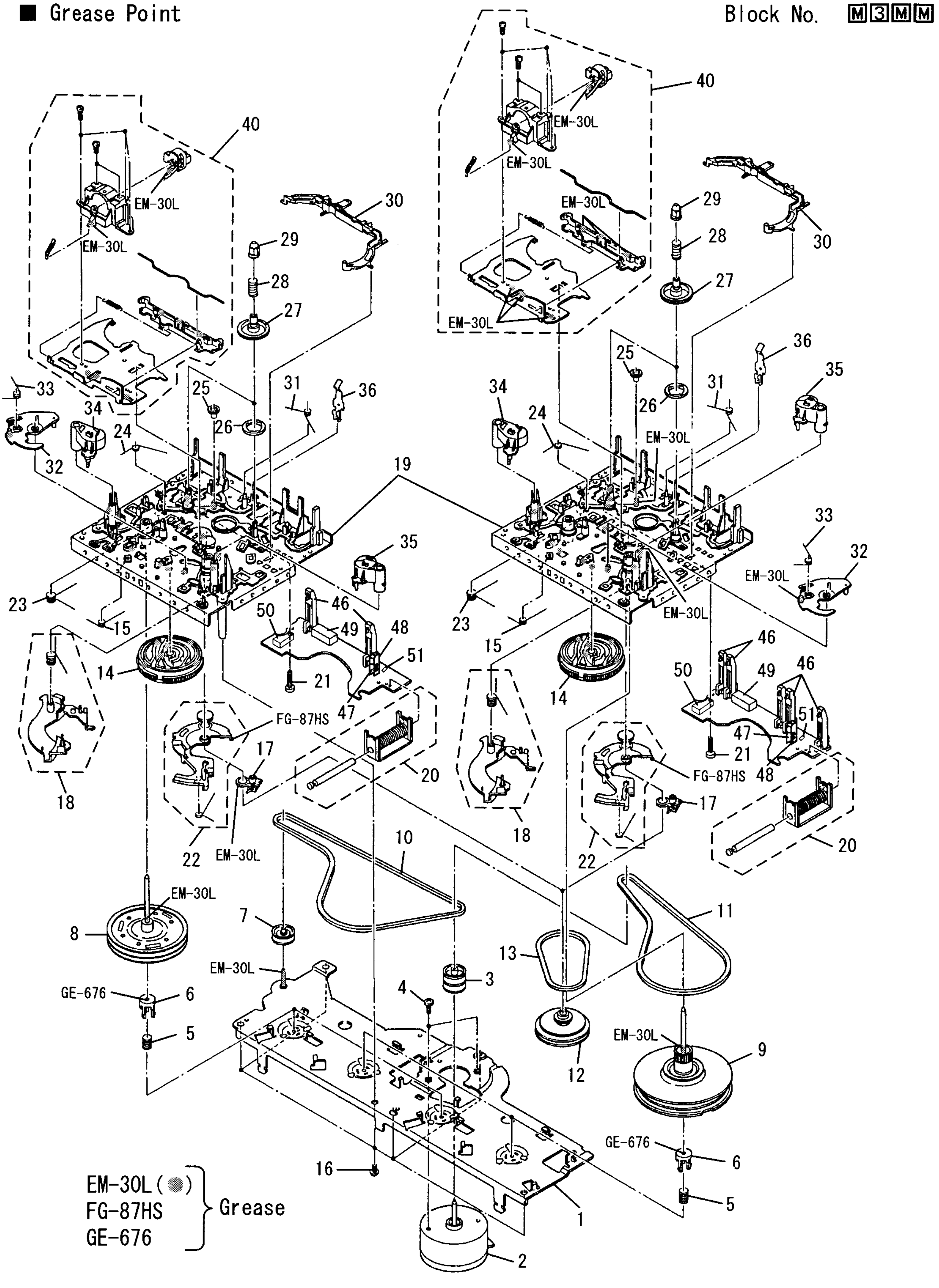
■ Parts List (CD Mechanism Ass'y)

⚠	Item	Parts Number	Parts Name	Q'ty	Description	Area
	1	EPB-002A	MECHANISM BASE ASS'Y	1		
	2	OPTIMA-6S	PICK UP ASS'Y	1		
	3	E406777-001	SHAFT	1		
	4	E307746-001	CD RACK	1		
	5	E307745-221SS	GEAR(3)	1		
	6	SDSP2003N	SCREW	4		
	7	E406750-001	PINION GEAR	1		
	8	EPB309173A	TURN TABLE	1		
	9	E406784-001	FEED MOTOR	1		
	10	E406783-001	SPINDLE MOTOR	1		
	11	EMW10190-001(S)	CIRCUIT BOARD	1		
	12	ESB1100-005	LEAF SWITCH	1		
	13	E75832-001	SCREW	1		
	14	EMV5109-006B	PLUG ASS'Y	1	6PIN	
	15	SDSF2006Z	SCREW	1		

Cassette Mechanism Ass'y and Parts List

■ Grease Point

Block No. M3MM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EM-30L
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FG-87HS
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GE-676
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EM-30L(●)
FG-87HS
GE-676
} Grease

■ Parts List (Cassette Mechanism Ass'y)

Block No. M3MM

⚠	Item	Parts Number	Parts Name	Q'ty	Description	Area
	1	VKM3835-00A	FLYWHEEL BRACKET	1		
	2	MMI-6H2LWK	DC MOTOR	1		
	3	VKR4740-003	MOTOR PULLEY	1		
	4	SPSP2603Z	WOOD SCREW	1		
	5	VKW5177-002	SPRING	1		
	6	VKS5524-001	THRUST GUIDE	1		
	7	VKR4747-001	IDLER PULLEY	1		
	8	VKF3202-00A	FLYWHEEL	2		
	9	VKF3200-00A	FLYWHEEL	2		
	10	VKB3000-161	CAPSTAN BELT	1		
	11	VKB3000-162	CAPSTAN BELT	1		
	12	VKS5523-00C	MAIN PULLY ASSY	2		
	13	VKB3000-167	REEL BELT	2		
	14	VKS1150-002	CONTROL CAM	2		
	15	VKW5170-002	SPRING	2		
	16	SBSF2608Z	TAPPING SCREW	6		
	17	VKS3719-002	ELEVATOR RING	2		
	18	VKS5525-00B	TRIGGER ARM	2		
	19	VKS1151-00A	CHASSIS BASE ASSY	2		
	20	VGP2401-00A	SOLENOID	2		
	21	SDST2612Z	SCREW	2		
	22	VKS3714-00B	F.F/REW.ARM	2		
	23	VKW5173-001	SPRING	2		
	24	VKW5202-002	SPRING	2		
	25	VKS5519-002	IDLER GEAR	2		
	26	VKZ4690-002	MAGNET	2		
	27	VKS3707-002	REEL GEAR	4		
	28	VKW5162-002	SPRING	4		
	29	VKS3708-002	REEL CAP	4		
	30	VKS2261-002	REEL STOPPER	2		
	31	VKW5178-001	BRAKE SPRING	2		
	32	VKS2255-001	DIRECTION LEVER	2		
	33	VKW5163-001	SPRING	2		
	34	VKP4232-00B	PINCH ROLLER	2		
	35	VKP4231-00B	PINCH ROLLER	2		
	36	VKY4670-001	CASSETTE SPRING	2		
	40	VKM3832-00F	HEAD BLOCK	1	B MECHANISM	
		VKM3834-00F	HEAD BLOCK	1	A MECHANISM	
	46	MXS00220MVL0	CASSETTE SWITCH	2		
	47	DN6851-HI	I.C(M)	2	IC1	
	48	VKS3630-001MM	I.C.PROTECTOR	2		
	49	VMC0314-P08	CONNECT TERMINAL	1	A MECHANISM	
		VMC0314-P14	CONNECT TERMINAL	1	B MECHANISM	
	50	QSEC001-E03	LEVER SWITCH	2	S6	
	51	1SR139-400	SI DIODE	2		
	52	VWSC04-11A13K	FLAT WIRE ASS'Y	1	FW1	

Electrical Parts List (ENH-292)

⚠	Item	Parts Number	Description	Area
		I.C.S		
	IC501	TDA7294	I.C(M)	
	IC502	TDA7294	I.C(M)	
	IC751	MN172412K8D2	I.C(MICRO-COMPUTER)	
	IC901	HA12136A	I.C(MONO-ANALOG)	
	IC902	BA8221N	I.C(MONO-ANALOG)	
		DIODES		
	D519	1SS133	SI.DIODE	
	D520	1SS133	SI.DIODE	
	D528	1SS133	SI.DIODE	
	D538	MTZ24JC	ZENERDIODE	
	D591	MTZ6.8JB	ZENERDIODE	
	D592	1SS133	SI.DIODE	
	D751	MTZ5.1JC	ZENERDIODE	
	D752	1SS133	SI.DIODE	
	D753	1SS133	SI.DIODE	
	D754	1SS133	SI.DIODE	
	D756	1SS133	SI.DIODE	
	D901	1SS133	SI.DIODE	
	D902	1SR35-100	SI.DIODE	
⚠	D1001	30D2FC	GE.DIODE	
⚠	D1002	30D2FC	GE.DIODE	
⚠	D1003	30D2FC	GE.DIODE	
⚠	D1004	30D2FC	GE.DIODE	
⚠	D1005	30D2FC	GE.DIODE	
⚠	D1006	30D2FC	GE.DIODE	
⚠	D1007	30D2FC	GE.DIODE	
⚠	D1008	30D2FC	GE.DIODE	
	D1009	30D2FC	GE.DIODE	
	D1010	30D2FC	GE.DIODE	
	D1011	1SS133	SI.DIODE	
	D1012	1SS133	SI.DIODE	
	D1013	1SS133	SI.DIODE	
	D1014	1SS133	SI.DIODE	
	D1015	1SS133	SI.DIODE	
	D1016	1SS133	SI.DIODE	
	D1017	MTZ3.9JB	ZENERDIODE	
	D1018	MTZ3.9JB	ZENERDIODE	
	D1019	1SS133	SI.DIODE	
	D1020	1SS133	SI.DIODE	
	D1021	1SS133	SI.DIODE	
	D1022	1SS133	SI.DIODE	
	D1023	MTZ3.3JB	ZENERDIODE	
	D1063	1SS133	SI.DIODE	
	D1065	1SS133	SI.DIODE	
		TRANSISTORS		
	Q501	2SA1038(R,S)	SI.TRANSISTOR	
	Q502	2SA1038(R,S)	SI.TRANSISTOR	
	Q523	2SK301(P,Q)	F.E.T.	
	Q526	2SC2389(S,E)	SI.TRANSISTOR	
	Q527	2SA1038(R,S)	SI.TRANSISTOR	
	Q528	2SC1740S(R,S)	SI.TRANSISTOR	
	Q539	2SC2389(S,E)	SI.TRANSISTOR	
	Q587	2SD2144S(VW)	SI.TRANSISTOR	
	Q588	2SD2144S(VW)	SI.TRANSISTOR	
	Q589	DTA114TS	DIGITALTRANSISTOR	
	Q592	2SB1187(F,G)	SI.TRANSISTOR	
	Q593	2SC945A	SI.TRANSISTOR	
	Q594	DTC114YS	DIGITALTRANSISTOR	
	Q595	DTA144ES	DIGITALTRANSISTOR	
	Q751	DTC114YS	DIGITALTRANSISTOR	
	Q752	DTC114YS	DIGITALTRANSISTOR	
	Q753	DTC114YS	DIGITALTRANSISTOR	
	Q901	2SC1740S(R,S)	SI.TRANSISTOR	
	Q902	2SC1740S(R,S)	SI.TRANSISTOR	
	Q903	2SA933S(RS)	SI.TRANSISTOR	

⚠	Item	Parts Number	Description	Area
	Q904	DTC144ES	DIGITALTRANSISTOR	
	Q905	DTA114YS	DIGITALTRANSISTOR	
	Q906	2SC1740S(R,S)	SI.TRANSISTOR	
	Q907	2SC1740S(R,S)	SI.TRANSISTOR	
	Q908	DTA144ES	DIGITALTRANSISTOR	
	Q909	2SD2144S(VW)	SI.TRANSISTOR	
	Q910	2SD2144S(VW)	SI.TRANSISTOR	
	Q911	DTC123YS	SI.TRANSISTOR	
	Q912	DTC123YS	SI.TRANSISTOR	
	Q913	2SA934(Q,R)	SI.TRANSISTOR	
	Q914	2SA934(Q,R)	SI.TRANSISTOR	
	Q1001	2SC1685	SI.TRANSISTOR	
	Q1002	2SA933S(RS)	SI.TRANSISTOR	
	Q1003	2SC1685	SI.TRANSISTOR	
	Q1004	2SA733A(P,K)	SI.TRANSISTOR	
	Q1005	2SA965(Y)	SI.TRANSISTOR	
	Q1006	2SC2235(O,Y)	SI.TRANSISTOR	
		CAPACITORS		
	C501	QETB1HM-225	2.2MF 50V ALE.CAP.	
	C502	QETB1HM-225	2.2MF 50V ALE.CAP.	
	C503	QCBB1HK-101Y	100PF 50V CER.CAP.	A U UB UP US UT
	C503	QCSB1HJ-270Y	27PF 50V CER.CAP.	BS EF EN G GI VX
	C504	QCBB1HK-101Y	100PF 50V CER.CAP.	A U UB UP US UT
	C504	QCSB1HJ-270Y	27PF 50V CER.CAP.	BS EF EN G GI VX
	C505	QCBB1HK-101Y	100PF 50V CER.CAP.	
	C506	QCBB1HK-101Y	100PF 50V CER.CAP.	
	C507	QETB1EM-476	47MF 25V ALE.CAP.	
	C508	QETB1EM-476	47MF 25V ALE.CAP.	
	C509	QCSB1HJ-100Y	10PF 50V CER.CAP.	
	C510	QCSB1HJ-100Y	10PF 50V CER.CAP.	
	C511	QETB1HM-226E	22MF 50V E.CAP.	
	C512	QETB1HM-226E	22MF 50V E.CAP.	
	C513	QFV81HJ-104	0.1MF 50V THINFILMCAP.	
	C514	QFV81HJ-104	0.1MF 50V THINFILMCAP.	
	C515	QFV81HJ-104	0.1MF 50V THINFILMCAP.	
	C516	QFV81HJ-104	0.1MF 50V THINFILMCAP.	
	C517	QFV81HJ-103	0.01MF 50V THINFILMCAP	
	C523	QFV81HJ-154	0.15MF 50V THINFILMCAP	
	C525	QETB1CM-476	47MF 16V ALE.CAP.	
	C526	QETC1EM-106ZM	10MF 25V ALE.CAP.	
	C527	QFLC1HJ-104ZM	0.1MF 50V MYLARCAP.	BS EF EN G GI VX
	C528	QFLC1HJ-104ZM	0.1MF 50V MYLARCAP.	BS EF EN G GI VX
	C535	QCXB1CM-222Y	2200PF 16V CER.CAP.	BS EF EN G GI VX
	C536	QCXB1CM-222Y	2200PF 16V CER.CAP.	BS EF EN G GI VX
	C596	QETB1CM-476	47MF 16V ALE.CAP.	
	C597	QFLC1HJ-223ZM	0.022MF 50V METAL.MYLAR	
	C598	QETB1AM-107	100MF 10V ALE.CAP.	
	C751	QETB1HM-225	2.2MF 50V ALE.CAP.	
	C752	QETB1HM-105	1MF 50V ALE.CAP.	
	C756	QETB1CM-476	47MF 16V ALE.CAP.	
	C757	QCZ0202-155	1.5MF 25V CER.RES.	
	C758	QCVB1CM-103Y	0.01MF 16V CER.CAP.	
	C759	QETB1CM-107	100MF 16V ALE.CAP.	
	C903	QETB1HM-105	1MF 50V ALE.CAP.	
	C904	QETB1HM-105	1MF 50V ALE.CAP.	
	C905	QCBB1HK-561Y	560PF 50V CER.CAP.	
	C906	QCBB1HK-561Y	560PF 50V CER.CAP.	
	C907	QETB1HM-105	1MF 50V ALE.CAP.	
	C908	QETB1HM-105	1MF 50V ALE.CAP.	
	C911	QETC1EM-106ZM	10MF 25V ALE.CAP.	
	C912	QETC1EM-106ZM	10MF 25V ALE.CAP.	
	C913	QETC1EM-106ZM	10MF 25V ALE.CAP.	
	C914	QETC1EM-106ZM	10MF 25V ALE.CAP.	
	C917	QFLC1HJ-473ZM	0.047MF 50V METAL.MYLAR	
	C918	QFLC1HJ-473ZM	0.047MF 50V METAL.MYLAR	
	C919	QFV81HJ-224	0.22MF 50V THINFILMCAP	

⚠	Item	Parts Number	Description	Area
	C920	QFV81HJ-224	0.22MF 50V THINFILMCAP	
	C921	QETB1CM-476	47MF 16V ALE.CAP.	
	C922	QETB1HM-475E	4.7MF 50V E.CAP.	
	C923	QETB1HM-475E	4.7MF 50V E.CAP.	
	C924	QETB1CM-476	47MF 16V ALE.CAP.	
	C925	QFLC1HJ-223ZM	0.022MF 50V METAL.MYLAR	
	C926	QFLC1HJ-223ZM	0.022MF 50V METAL.MYLAR	
	C927	QETB1HM-105	1MF 50V ALE.CAP.	
	C1001	QETB1HM-228E	2200MF 50V ELECTRO	
	C1001	QETM1HM-228	2200MF 50V E.CAP.	
	C1002	QETB1HM-228E	2200MF 50V ELECTRO	
	C1002	QETM1HM-228	2200MF 50V E.CAP.	
	C1003	QETM1VM-228J7	2200MF 35V E.CAP.	
	C1004	QETM1VM-228J7	2200MF 35V E.CAP.	
	C1005	QCXB1CM-272Y	2700PF 16V CER.CAP.	
	C1006	QCXB1CM-272Y	2700PF 16V CER.CAP.	
	C1007	QCXB1CM-472Y	4700PF 16V CER.CAP.	
	C1008	QCXB1CM-472Y	4700PF 16V CER.CAP.	
	C1009	QFV81HJ-105	1MF 50V THINFILMCAP.	
	C1010	QFV81HJ-105	1MF 50V THINFILMCAP.	
	C1011	QFLB2AJ-103	0.01MF 100V MYLARCAP.	A U UB UP US UT
	C1011	QFV82AJ-104	0.1MF 100V THINFILMCAP	BS EF EN G GI VX
	C1012	QFLB2AJ-103	0.01MF 100V MYLARCAP.	A U UB UP US UT
	C1012	QFV82AJ-104	0.1MF 100V THINFILMCAP	BS EF EN G GI VX
	C1013	QFLB2AJ-103	0.01MF 100V MYLARCAP.	A U UB UP US UT
	C1013	QFV82AJ-104	0.1MF 100V THINFILMCAP	BS EF EN G GI VX
	C1014	QFV81HJ-103	0.01MF 50V THINFILMCAP	A U UB UP US UT
	C1014	QFV81HJ-104	0.1MF 50V THINFILMCAP.	BS EF EN G GI VX
	C1015	QFV81HJ-103	0.01MF 50V THINFILMCAP	A U UB UP US UT
	C1015	QFV81HJ-104	0.1MF 50V THINFILMCAP.	BS EF EN G GI VX
	C1016	QFV81HJ-103	0.01MF 50V THINFILMCAP	A U UB UP US UT
	C1016	QFV81HJ-104	0.1MF 50V THINFILMCAP.	BS EF EN G GI VX
	C1061	QETB1HM-475E	4.7MF 50V E.CAP.	
		RESISTORS		
	R002	QRD161J-104	100K 1/6W CARBONRES.	U UB US UT
	R003	QRD161J-104	100K 1/6W CARBONRES.	U UB US UT
	R004	QRD161J-104	100K 1/6W CARBONRES.	U UB US UT
	R501	QRD161J-471	470 1/6W CARBONRES.	
	R502	QRD161J-471	470 1/6W CARBONRES.	
	R503	QRD161J-563	56K 1/6W CARBONRES.	
	R504	QRD161J-563	56K 1/6W CARBONRES.	
⚠	R505	QRD14CJ-821SX	820 1/4W CARBONRES.	
⚠	R506	QRD14CJ-821SX	820 1/4W CARBONRES.	
	R507	QRD161J-563	56K 1/6W CARBONRES.	
	R508	QRD161J-563	56K 1/6W CARBONRES.	
⚠	R509	QRX014J-R22	0.22 1W METALFILMR	
⚠	R510	QRX014J-R22	0.22 1W METALFILMR	
⚠	R511	QRX014J-R22	0.22 1W METALFILMR	
⚠	R512	QRX014J-R22	0.22 1W METALFILMR	
⚠	R513	QRD14CJ-100SX	10 1/4W UNF.CARBONR	
⚠	R514	QRD14CJ-100SX	10 1/4W UNF.CARBONR	
⚠	R515	QRD14CJ-100SX	10 1/4W UNF.CARBONR	
⚠	R516	QRD14CJ-100SX	10 1/4W UNF.CARBONR	
	R517	QRD161J-122	1.2K 1/6W CARBONRES.	
	R518	QRD161J-122	1.2K 1/6W CARBONRES.	
	R519	QRD167J-223	22K 1/6W CARBONRES.	
	R520	QRD167J-223	22K 1/6W CARBONRES.	
	R521	QRD161J-103	10K 1/6W CARBONRES.	
	R522	QRD161J-103	10K 1/6W CARBONRES.	
	R523	QRD161J-162	1.6K 1/6W CARBONRES.	
	R524	QRD161J-105	1M 1/6W CARBONRES.	
	R525	QRD161J-105	1M 1/6W CARBONRES.	
	R526	QRD161J-103	10K 1/6W CARBONRES.	
	R527	QRD161J-104	100K 1/6W CARBONRES.	
	R528	QRD161J-103	10K 1/6W CARBONRES.	
	R529	QRD161J-104	100K 1/6W CARBONRES.	

⚠	Item	Parts Number	Description	Area
	R531	QRD161J-104	100K 1/6W CARBONRES.	
	R532	QRD161J-823	82K 1/6W CARBONRES.	
⚠	R533	QRD14CJ-4R7SX	4.7 1/4W UNF.CARBONR	BS EF EN G GI VX
⚠	R534	QRD14CJ-4R7SX	4.7 1/4W UNF.CARBONR	BS EF EN G GI VX
	R541	QRD167J-152	1.5K 1/6W CARBONRES.	
	R542	QRD161J-222	2.2K 1/6W CARBONRES.	
	R543	QRD161J-103	10K 1/6W CARBONRES.	
⚠	R545	QRG01DJ-471X	470 1W OXIDEMETAL	
⚠	R546	QRG01DJ-471X	470 1W OXIDEMETAL	
⚠	R581	QRZ0077-220X	22 1/4W FUSIBLERES.	U UB UP US UT
⚠	R585	QRD14CJ-681SX	680 1/4W UNF.CARBONR	
⚠	R586	QRD14CJ-681SX.	680 1/4W UNF.CARBONR	
⚠	R587	QRD14CJ-681SX	680 1/4W UNF.CARBONR	
⚠	R588	QRD14CJ-681SX	680 1/4W UNF.CARBONR	
	R589	QRD161J-473	47K 1/6W CARBONRES.	
	R590	QRD161J-473	47K 1/6W CARBONRES.	
	R591	QRD161J-103	10K 1/6W CARBONRES.	
	R594	QRD161J-122	1.2K 1/6W CARBONRES.	
	R595	QRD167J-121	120 1/6W CARBONRES.	
	R596	QRD161J-103	10K 1/6W CARBONRES.	
	R726	QRD161J-103	10K 1/6W CARBONRES.	
	R741	QRD161J-102	1K 1/6W CARBONRES.	
	R742	QRD161J-102	1K 1/6W CARBONRES.	
	R743	QRD161J-102	1K 1/6W CARBONRES.	
	R744	QRD161J-102	1K 1/6W CARBONRES.	
	R747	QRD161J-102	1K 1/6W CARBONRES.	
	R748	QRD161J-102	1K 1/6W CARBONRES.	
	R749	QRD161J-102	1K 1/6W CARBONRES.	
	R751	QRD161J-103	10K 1/6W CARBONRES.	A BS EF EN G GI VX
	R751	QRD161J-563	56K 1/6W CARBONRES.	U UB UP US UT
	R752	QRD161J-103	10K 1/6W CARBONRES.	
	R753	QRD161J-102	1K 1/6W CARBONRES.	
	R754	QRD161J-104	100K 1/6W CARBONRES.	
	R755	QRD161J-103	10K 1/6W CARBONRES.	
	R756	QRD161J-103	10K 1/6W CARBONRES.	
	R757	QRD167J-562	5.6K 1/6W CARBONRES.	
	R758	QRD161J-103	10K 1/6W CARBONRES.	
	R759	QRD161J-103	10K 1/6W CARBONRES.	
	R760	QRD161J-103	10K 1/6W CARBONRES.	
	R761	QRD161J-104	100K 1/6W CARBONRES.	
	R762	QRD161J-103	10K 1/6W CARBONRES.	
	R763	QRD161J-103	10K 1/6W CARBONRES.	
	R764	QRD161J-105	1M 1/6W CARBONRES.	
	R765	QRD161J-103	10K 1/6W CARBONRES.	
	R766	QRD161J-103	10K 1/6W CARBONRES.	
	R768	QRD161J-103	10K 1/6W CARBONRES.	
	R769	QRD161J-103	10K 1/6W CARBONRES.	
	R770	QRD161J-103	10K 1/6W CARBONRES.	
	R775	QRD167J-121	120 1/6W CARBONRES.	
	R901	QRD161J-222	2.2K 1/6W CARBONRES.	
	R902	QRD161J-222	2.2K 1/6W CARBONRES.	
	R903	QRD161J-393	39K 1/6W CARBONRES.	
	R904	QRD161J-393	39K 1/6W CARBONRES.	
	R905	QRD161J-183	18K 1/6W CARBONRES.	
	R906	QRD161J-183	18K 1/6W CARBONRES.	
⚠	R907	QRZ0077-220X	22 1/4W FUSIBLERES.	
	R908	QRD161J-103	10K 1/6W CARBONRES.	
	R909	QRD161J-183	18K 1/6W CARBONRES.	
	R910	QRD161J-183	18K 1/6W CARBONRES.	
	R911	QRD161J-105	1M 1/6W CARBONRES.	
	R920	QRD161J-273	27K 1/6W CARBONRES.	
	R921	QRD161J-473	47K 1/6W CARBONRES.	
	R922	QRD161J-473	47K 1/6W CARBONRES.	
	R923	QRD161J-473	47K 1/6W CARBONRES.	
	R924	QRD161J-103	10K 1/6W CARBONRES.	
	R925	QRD161J-104	100K 1/6W CARBONRES.	

⚠	Item	Parts Number	Description	Area
	R926	QRD161J-274	270K 1/6W CARBONRES.	
	R927	QRD161J-103	10K 1/6W CARBONRES.	
	R928	QRD161J-105	1M 1/6W CARBONRES.	
	R929	QRD161J-104	100K 1/6W CARBONRES.	
	R930	QRD161J-105	1M 1/6W CARBONRES.	
	R931	QRD161J-913	91K 1/6W CARBONRES.	
	R933	QRD161J-754	750K 1/6W CARBONRES.	
	R934	QRD161J-754	750K 1/6W CARBONRES.	
	R935	QRD161J-102	1K 1/6W CARBONRES.	
	R936	QRD161J-102	1K 1/6W CARBONRES.	
	R937	QRD161J-202	2K 1/6W CARBONRES.	
	R938	QRD161J-202	2K 1/6W CARBONRES.	
	R939	QRD161J-392	3.9K 1/6W CARBONRES.	
	R940	QRD161J-392	3.9K 1/6W CARBONRES.	
	R941	QRD161J-471	470 1/6W CARBONRES.	
	R942	QRD161J-471	470 1/6W CARBONRES.	
	R943	QRD161J-471	470 1/6W CARBONRES.	
	R944	QRD161J-471	470 1/6W CARBONRES.	
⚠	R945	QRX022J-3R3A	3.3 2W METALFILMR	
⚠	R946	QRX022J-3R3A	3.3 2W METALFILMR	
	R1001	QRD167J-223	22K 1/6W CARBONRES.	
	R1002	QRD167J-223	22K 1/6W CARBONRES.	
	R1003	QRD167J-223	22K 1/6W CARBONRES.	
	R1004	QRD167J-223	22K 1/6W CARBONRES.	
	R1005	QRD161J-221	220 1/6W CARBONRES.	
	R1006	QRD161J-221	220 1/6W CARBONRES.	
	R1007	QRD161J-222	2.2K 1/6W CARBONRES.	
	R1008	QRD161J-222	2.2K 1/6W CARBONRES.	
	R1009	QRD161J-222	2.2K 1/6W CARBONRES.	
	R1010	QRD161J-222	2.2K 1/6W CARBONRES.	
	R1011	QRD167J-223	22K 1/6W CARBONRES.	
	R1012	QRD167J-223	22K 1/6W CARBONRES.	
	R1013	QRD167J-682	6.8K 1/6W CARBONRES.	
	R1014	QRD167J-682	6.8K 1/6W CARBONRES.	
⚠	R1015	QRD14CJ-681SX	680 1/4W UNF.CARBONR	
⚠	R1016	QRD14CJ-681SX	680 1/4W UNF.CARBONR	
⚠	R1017	QRD14CJ-821SX	820 1/4W CARBONRES.	
⚠	R1018	QRD14CJ-821SX	820 1/4W CARBONRES.	
	R1019	QRD161J-821	820 1/6W CARBONRES.	
	R1020	QRD161J-821	820 1/6W CARBONRES.	
	R1021	QRD161J-182	1.8K 1/6W CARBONRES.	
	R1022	QRD161J-182	1.8K 1/6W CARBONRES.	
	R1025	QRD161J-473	47K 1/6W CARBONRES.	
	R1026	QRD161J-473	47K 1/6W CARBONRES.	
⚠	R1027	QRD14CJ-101S	100 1/4W UNF.CARBONR	
⚠	R1028	QRD14CJ-101S	100 1/4W UNF.CARBONR	
	R1061	QRD161J-473	47K 1/6W CARBONRES.	
	R1062	QRD167J-153	15K 1/6W CARBONRES.	
	R1063	QRD161J-103	10K 1/6W CARBONRES.	
⚠	R1601	QRD14CJ-4R7SX	4.7 1/4W UNF.CARBONR	
⚠	R1602	QRD14CJ-4R7SX	4.71/4W UNF.CARBONR	
	VR901	QVPA603-103A	10K TRIMMER RES.	
		OTHERS		
		FMMW1014-102	PRINTEDBOARD	
	J541	EMB10TV-401BJ4	SPEAKERTERMINAL	
	L501	EQL0001-R45	INDUCTOR	
	L502	EQL0001-R45	INDUCTOR	
	S001	QSR8001-E01U	ROTARYSWITCH	U UB US UT
	X751	ECXP6R0-001ZA	CRYSTAL	
	CN311	VMC0314-S08	CONNECTTERMINAL	
	CN312	VMC0314-S08	CONNECTTERMINAL	
	CN313	VMC0314-S14	CONNECTTERMINAL	
	CN314	VMC0314-S08	CONNECTTERMINAL	
	CN412	EWS293-0122	SOCKETWIREASSY	
	CN501	EMV5163-018R	CONNECTTERMINAL	
	CN503	EMV7167-016R	CONNECTTERMINAL	
	CN504	EMV7167-026R	CONNECTTERMINAL	
	CN511	EMV7163-018	CONNECTTERMINAL	
	CN512	EMV5125-010	MALECONNECTOR	
	CN613	EMV7160-007	CONNECTTERMINAL	
	CN614	EMV7155-111R	CONNECTTERMINAL	
	CN811	VMC0163-R10	CONNECTTERMINAL	
	CN901	VMC0107-R09	CONNECTTERMINAL	
⚠	CP901	ICP-N15	I.C.PROTECTOR	
	EP501	E409182-001SM	EARTHTERMINAL	
	FL002	E61380-034	FUSELABEL	UP
	FL101	E61380-037	FUSELABEL	UP
	FL102	E61380-037	FUSELABEL	UP
	FT001	VMZ0087-001Z	FUSEHOLDER	A BS EF EN G GI VX
	FT002	VMZ0087-001Z	FUSEHOLDER	A BS EF EN G GI VX
	FT003	VMZ0087-001Z	FUSEHOLDER	U UB UP US UT
	FT004	VMZ0087-001Z	FUSEHOLDER	U UB UP US UT
	FT005	VMZ0087-001Z	FUSEHOLDER	U UB US UT
	FT006	VMZ0087-001Z	FUSEHOLDER	U UB US UT
	FT101	VMZ0087-001Z	FUSEHOLDER	
	FT102	VMZ0087-001Z	FUSEHOLDER	
	FT103	VMZ0087-001Z	FUSEHOLDER	
	FT104	VMZ0087-001Z	FUSEHOLDER	
	FW501	EWR39B-25SST	FLATWIREASSY	
	FW581	EWR33B-25SST	FLATWIREASSY	
	FW582	EWR35B-10SST	FLATWIREASSY	
	FW583	EWR36B-16SST	FLATWIREASSY	
	K1701	ENZ8101-007	INDUCTOR	BS EF EN G GI VX
	K1702	ENZ8101-007	INDUCTOR	BS EF EN G GI VX
	RY501	ESK7D24-213R	RELAY	
	SP751	VYH7653-001	SPRING	
	TB001	EMZ4001-001	TAB	
	TB002	EMZ4001-001	TAB	

Electrical Parts List (ENC-132)

⚠	Item	Parts Number	Description	Area
		I.C.S		
	IC104	LA1266A	I.C(MONO-ANALOG)	
	IC105	LA3401	I.C(MONO-ANALOG)	
	IC121	LC72131	I.C(M)	
	IC301	XRA15218N	I.C(MONO-ANALOG)	
	IC302	XRA15218N	I.C(MONO-ANALOG)	
	IC303	XRA15218N	I.C(MONO-ANALOG)	
	IC304	BA3126N	I.C(MONO-ANALOG)	
	IC401	TDA7318	I.C(M)	
	IC403	XRA15218N	I.C(MONO-ANALOG)	U UB UP US UT
	IC413	XRA15218N	I.C(MONO-ANALOG)	
	IC421	BU4066BC	I.C(DIGI-MOS)	U UB UP US UT
	IC423	XRA15218N	I.C(MONO-ANALOG)	U UB UP US UT
		DIODES		
	D104	1SS133	SI.DIODE	
	D105	1SS133	SI.DIODE	
	D106	1SS133	SI.DIODE	
	D109	1SS133	SI.DIODE	
	D110	1SS133	SI.DIODE	
	D115	1SS133	SI.DIODE	
	D116	1SS133	SI.DIODE	
	D120	1SS133	SI.DIODE	
	D290	1SS133	SI.DIODE	
	D303	1SS119	SI.DIODE	BS EF EN G GI VX
	D406	MTZ2.4JB	ZENERDIODE	U UB UP US UT
	D407	MTZ2.4JB	ZENERDIODE	U UB UP US UT
	D408	MTZ9.1JC	ZENERDIODE	
	D411	1SS133	SI.DIODE	
	D412	1SS133	SI.DIODE	
	D423	MTZ5.1JC	ZENERDIODE	U UB UP US UT
	D424	MTZ5.1JC	ZENERDIODE	U UB UP US UT
	D551	MTZ12JB	ZENERDIODE	
	D552	MTZ6.8JC	ZENERDIODE	
	D553	MTZ6.8JC	ZENERDIODE	
	D554	MTZ13JC	ZENERDIODE	
	D555	MTZ13JC	ZENERDIODE	
	D556	1SS133	SI.DIODE	
	D557	1SS133	SI.DIODE	
	D558	1SS133	SI.DIODE	
	D559	1SR35-200A	SI.DIODE	
	D564	MTZ13JC	ZENERDIODE	
	D571	RD8.2JSB3	ZENERDIODE	
	D579	MTZ7.5JC	ZENERDIODE	
	D587	MTZ33JC	ZENERDIODE	
	D588	1SR35-100	SI.DIODE	
	D589	1SR35-100	SI.DIODE	
		TRANSISTORS		
	Q103	2SC461	SI.TRANSISTOR	
	Q107	2SC535	SI.TRANSISTOR	
	Q108	2SC461	SI.TRANSISTOR	
	Q111	2SD2144S(VW)	SI.TRANSISTOR	BS EF EN G GI VX
	Q112	2SD2144S(VW)	SI.TRANSISTOR	BS EF EN G GI VX
	Q113	2SD2144S(VW)	SI.TRANSISTOR	BS EF EN G GI VX
	Q114	2SC1740S(R,S)	SI.TRANSISTOR	BS EF EN G GI VX
	Q123	BN1A4P	DIGITALTRANSISTOR	
	Q124	BN1A4P	DIGITALTRANSISTOR	
	Q127	BA1L4M	DIGITALTRANSISTOR	
	Q301	2SC1740S(R,S)	SI.TRANSISTOR	
	Q302	2SC1740S(R,S)	SI.TRANSISTOR	
	Q303	2SC1740S(R,S)	SI.TRANSISTOR	
	Q304	2SC1740S(R,S)	SI.TRANSISTOR	
	Q305	2SC1740S(R,S)	SI.TRANSISTOR	
	Q306	2SC1740S(R,S)	SI.TRANSISTOR	
	Q309	DTC144TS	DIGITALTRANSISTOR	
	Q310	DTC144TS	DIGITALTRANSISTOR	
	Q326	2SC1740S(R,S)	SI.TRANSISTOR	
	Q327	2SC1740S(R,S)	SI.TRANSISTOR	
	Q328	2SC1740S(R,S)	SI.TRANSISTOR	
	Q329	2SC1740S(R,S)	SI.TRANSISTOR	
	Q330	2SC945A	SI.TRANSISTOR	BS EF EN G GI VX

⚠	Item	Parts Number	Description	Area
	Q331	DTA144ES	DIGITALTRANSISTOR	BS EF EN G GI VX
	Q341	2SC1740S(R,S)	SI.TRANSISTOR	
	Q342	2SC1740S(R,S)	SI.TRANSISTOR	
	Q401	2SD2144S(VW)	SI.TRANSISTOR	
	Q402	2SD2144S(VW)	SI.TRANSISTOR	
	Q403	DTA144ES	DIGITALTRANSISTOR	
	Q421	DTC144ES	DIGITALTRANSISTOR	U UB UP US UT
	Q422	DTA144ES	DIGITALTRANSISTOR	U UB UP US UT
	Q551	2SC1740S(R,S)	SI.TRANSISTOR	
	Q552	2SB1187(F,G)	SI.TRANSISTOR	
	Q553	2SC1740S(R,S)	SI.TRANSISTOR	
	Q554	2SD2061(F,G)	SI.TRANSISTOR	
	Q557	DTC144ES	DIGITALTRANSISTOR	
	Q558	DTA144ES	DIGITALTRANSISTOR	
	Q559	DTA144ES	DIGITALTRANSISTOR	
	Q560	DTC144ES	DIGITALTRANSISTOR	
	Q563	2SB1187(F,G)	SI.TRANSISTOR	
	Q565	2SA933S(RS)	SI.TRANSISTOR	
	Q571	2SD2037(E,F)	SI.TRANSISTOR	
	Q581	2SA934(Q,R)	SI.TRANSISTOR	
		CAPACITORS		
	C101	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C111	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C113	QCC31EM-473ZV	0.047MF 25V CER.CAP.	
	C115	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C116	QCSB1HJ-120Y	12PF 50V CER.CAP.	
	C122	QCF21HP-223A	0.022MF 50V CER.CAP.	
	C131	QCVB1CM-103Y	0.01MF 16V CER.CAP.	
	C150	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C151	QCF21HP-223A	0.022MF 50V CER.CAP.	
	C152	QCF21HP-223A	0.022MF 50V CER.CAP.	
	C153	QCC11EM-223V	0.022MF 25V CER.CAP.	
	C154	QCF21HP-223A	0.022MF 50V CER.CAP.	
	C155	QETB1EM-226N	22MF 25V E.CAP.	
	C156	QCVB1CM-103Y	0.01MF 16V CER.CAP.	
	C157	QETB1HM-474	0.47MF 50V E.CAP.	
	C158	QCBB1HK-101Y	100PF 50V CER.CAP.	
	C159	QCBB1HK-101Y	100PF 50V CER.CAP.	
	C160	QCS31HJ-101Z	100PF 50V CER.CAP.	A U UB UP US UT
	C160	QCS31HJ-221Z	220PF 50V CER.CAP.	BS EF EN G GI VX
	C161	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C162	QETC1EM-106ZM	10MF 25V ALE.CAP.	
	C163	QCY31HK-332Z	3300PF 50V CER.CAP.	
	C164	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C165	QETB1HM-474	0.47MF 50V E.CAP.	
	C166	QETB1HM-225	2.2MF 50V ALE.CAP.	
	C167	QETB1HM-225	2.2MF 50V ALE.CAP.	
	C168	QETB1HM-475E	4.7MF 50V E.CAP.	
	C169	QCF21HP-223A	0.022MF 50V CER.CAP.	
	C170	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C171	QETC1EM-106ZM	10MF 25V ALE.CAP.	
	C172	QCVB1CM-103Y	0.01MF 16V CER.CAP.	
	C173	QFLC1HK-223ZM	0.022MF 50V MYLAR	A EF EN G GI U UB UP US UT VX
	C173	QFLC1HK-473	0.047MF 50V METAL.MYLAR	BS
	C174	QFLC1HK-473	0.047MF 50V METAL.MYLAR	
	C175	QETC1EM-106ZM	10MF 25V ALE.CAP.	
	C176	QCY31HK-102Z	1000PF 50V CER.CAP.	
	C177	QCBB1HK-271Y	270PF 50V CER.CAP.	A
	C177	QCBB1HK-331Y	330PF 50V CER.CAP.	BS EF EN G GI VX
	C177	QCBB1HK-681Y	680PF 50V CER.CAP.	U UB UP US UT
	C178	QCBB1HK-271Y	270PF 50V CER.CAP.	A
	C178	QCBB1HK-331Y	330PF 50V CER.CAP.	BS EF EN G GI VX
	C178	QCBB1HK-681Y	680PF 50V CER.CAP.	U UB UP US UT
	C179	QETB1HM-225	2.2MF 50V ALE.CAP.	
	C180	QETB1HM-225	2.2MF 50V ALE.CAP.	
	C181	QETC1EM-106ZM	10MF 25V ALE.CAP.	
	C183	QETB1HM-105	1MF 50V ALE.CAP.	
	C184	QETB1HM-105	1MF 50V ALE.CAP.	
	C185	QETB1HM-225	2.2MF 50V ALE.CAP.	

⚠	Item	Parts Number	Description	Area
	C186	QETB1HM-474	0.47MF 50V E.CAP.	
	C187	QFLC1HJ-562ZM	5600PF 50V MYLARCAP.	
	C188	QFLC1HJ-562ZM	5600PF 50V MYLARCAP.	
	C192	QCC31EM-473ZV	0.047MF 25V CER.CAP.	
	C193	QCT25CH-180Z	18PF 50V CER.CAP.	VX
	C194	QCT25CH-180Z	18PF 50V CER.CAP.	VX
	C195	QCY31HK-102Z	1000PF 50V CER.CAP.	
	C196	QEN51HM-474	0.47MF 50V NPE.CAP.	
	C200	QCF31HP-103Z	0.01MF 50V CER.CAP.	
	C201	QETB1CM-227	220MF 16V ALE.CAP.	
	C202	QETB1CM-477M	470MF 16V E.CAP.	VX
	C204	QCSB1HJ-150Y	15PF 50V CER.CAP.	BS EF EN G GI VX
	C205	QCSB1HK-5R6Y	5.6PF 50V CER.CAP.	BS EF EN G GI VX
	C230	QCF31HP-103Z	0.01MF 50V CER.CAP.	
	C301	QETB1HM-225	2.2MF 50V ALE.CAP.	
	C302	QETB1HM-225	2.2MF 50V ALE.CAP.	
	C303	QETB1HM-225	2.2MF 50V ALE.CAP.	
	C304	QETB1HM-225	2.2MF 50V ALE.CAP.	
	C305	QCBB1HK-101Y	100PF 50V CER.CAP.	
	C306	QCBB1HK-101Y	100PF 50V CER.CAP.	
	C307	QCBB1HK-181Y	180PF 50V CER.CAP.	
	C308	QCBB1HK-181Y	180PF 50V CER.CAP.	
	C311	QCSB1HJ-470Y	47PF 50V CER.CAP.	
	C312	QCSB1HJ-470Y	47PF 50V CER.CAP.	
	C313	QETB1CM-476	47MF 16V ALE.CAP.	
	C314	QETB1CM-476	47MF 16V ALE.CAP.	
	C315	QETB1HM-105	1MF 50V ALE.CAP.	
	C316	QETB1HM-105	1MF 50V ALE.CAP.	
	C317	QETC1EM-106ZM	10MF 25V ALE.CAP.	
	C318	QETB1CM-107	100MF 16V ALE.CAP.	
	C320	QFLC1HJ-682ZM	6800PF 50V MYLARCAP.	
	C321	QFLC1HJ-332ZM	3300PF 50V METAL.MYLAR	
	C322	QFLC1HJ-332ZM	3300PF 50V METAL.MYLAR	
	C323	QFLC1HJ-183ZM	0.018MF 50V METAL.MYLAR	
	C324	QFP31HG-472	4700PF 50V POLYPROPY	
	C325	QCBB1HK-101Y	100PF 50V CER.CAP.	
	C326	QCBB1HK-101Y	100PF 50V CER.CAP.	
	C327	QCBB1HK-561Y	560PF 50V CER.CAP.	BS EF EN G GI VX
	C328	QCHB1EZ-223	0.022MF 25V CER.CAP.	BS EF EN G GI VX
	C333	QFLC1HJ-333ZM	0.033MF 50V MYLARCAP.	
	C334	QFLC1HJ-333ZM	0.033MF 50V MYLARCAP.	
	C347	QFLC1HJ-682ZM	6800PF 50V MYLARCAP.	
	C348	QFLC1HJ-682ZM	6800PF 50V MYLARCAP.	
	C349	QFLC1HJ-103ZM	0.01MF 50V METAL.MYLAR	
	C350	QFLC1HJ-103ZM	0.01MF 50V METAL.MYLAR	
	C353	QCY31HK-392Z	3900PF 50V CER.CAP.	
	C354	QCY31HK-392Z	3900PF 50V CER.CAP.	
	C355	QFN81HJ-822	8200PF 50V METAL.MYLAR	
	C356	QFN81HJ-822	8200PF 50V METAL.MYLAR	
	C361	QCF31HP-473Z	0.047MF 50V CER.CAP.	
	C362	QCF31HP-473Z	0.047MF 50V CER.CAP.	
	C365	QEK51HM-225G	2.2MF 50V ALE.CAP.	
	C366	QEK51HM-225G	2.2MF 50V ALE.CAP.	
	C367	QFLC1HJ-682ZM	6800PF 50V MYLARCAP.	
	C368	QFLC1HJ-682ZM	6800PF 50V MYLARCAP.	
	C369	QETB1AM-107	100MF 10V ALE.CAP.	
	C370	QETB1AM-107	100MF 10V ALE.CAP.	
	C371	QETB1HM-225	2.2MF 50V ALE.CAP.	
	C372	QETB1HM-225	2.2MF 50V ALE.CAP.	
	C373	QETB1CM-476	47MF 16V ALE.CAP.	
	C374	QETB1EM-476	47MF 25V ALE.CAP.	
	C375	QCBB1HK-101Y	100PF 50V CER.CAP.	
	C376	QCBB1HK-101Y	100PF 50V CER.CAP.	
	C377	QCXB1CM-122Y	1200PF 16V CER.CAP.	
	C378	QCXB1CM-122Y	1200PF 16V CER.CAP.	
	C379	QCBB1HK-331Y	330PF 50V CER.CAP.	
	C380	QCBB1HK-331Y	330PF 50V CER.CAP.	
	C381	QETB1CM-476	47MF 16V ALE.CAP.	
	C385	QFLC1HJ-682ZM	6800PF 50V MYLARCAP.	
	C386	QFLC1HJ-682ZM	6800PF 50V MYLARCAP.	
	C387	QETB1AM-107	100MF 10V ALE.CAP.	
	C388	QETB1AM-107	100MF 10V ALE.CAP.	
	C389	QETB1HM-225	2.2MF 50V ALE.CAP.	
	C390	QETB1HM-225	2.2MF 50V ALE.CAP.	
	C391	QETB1CM-476	47MF 16V ALE.CAP.	
	C392	QETB1CM-476	47MF 16V ALE.CAP.	
	C393	QCBB1HK-101Y	100PF 50V CER.CAP.	
	C394	QCBB1HK-101Y	100PF 50V CER.CAP.	
	C395	QCXB1CM-152Y	1500PF 16V CER.CAP.	
	C396	QCXB1CM-152Y	1500PF 16V CER.CAP.	
	C397	QCBB1HK-391Y	390PF 50V CER.CAP.	
	C398	QCBB1HK-391Y	390PF 50V CER.CAP.	
	C401	QETC1HM-224ZM	0.22MF 50V E.CAP.	
	C402	QETC1HM-224ZM	0.22MF 50V E.CAP.	
	C403	QETC1HM-224ZM	0.22MF 50V E.CAP.	
	C404	QETC1HM-224ZM	0.22MF 50V E.CAP.	
	C405	QCBB1HK-102Y	1000PF 50V CER.CAP.	
	C406	QCBB1HK-102Y	1000PF 50V CER.CAP.	
	C407	QETB1CM-226	22MF 16V E.CAP.	
	C408	QETB1CM-226	22MF 16V E.CAP.	
	C409	QETB1HM-475E	4.7MF 50V E.CAP.	A BS EF EN G GI VX
	C410	QETB1HM-475E	4.7MF 50V E.CAP.	A BS EF EN G GI VX
	C411	QETB1HM-475E	4.7MF 50V E.CAP.	U UB UP US UT
	C412	QETB1HM-475E	4.7MF 50V E.CAP.	U UB UP US UT
	C413	QETB1HM-475E	4.7MF 50V E.CAP.	
	C414	QETB1HM-475E	4.7MF 50V E.CAP.	
	C415	QETB1HM-105	1MF 50V ALE.CAP.	
	C416	QETB1HM-105	1MF 50V ALE.CAP.	
	C418	QFLC1HJ-683ZM	0.068MF 50V MYLARCAP.	U UB UP US UT
	C419	QETB1HM-475E	4.7MF 50V E.CAP.	U UB UP US UT
	C421	QETB1HM-475E	4.7MF 50V E.CAP.	U UB UP US UT
	C422	QETB1HM-475E	4.7MF 50V E.CAP.	U UB UP US UT
	C423	QETB1CM-226	22MF 16V E.CAP.	U UB UP US UT
	C425	QETB1HM-475E	4.7MF 50V E.CAP.	U UB UP US UT
	C426	QETB1HM-475E	4.7MF 50V E.CAP.	U UB UP US UT
	C427	QCBB1HK-101Y	100PF 50V CER.CAP.	U UB UP US UT
	C428	QCBB1HK-101Y	100PF 50V CER.CAP.	U UB UP US UT
	C430	QETB1CM-226	22MF 16V E.CAP.	
	C445	QCS31HJ-121Z	120PF 50V CER.CAP.	BS EF EN G GI VX
	C451	QFLC1HJ-472ZM	4700PF 50V METAL.MYLAR	
	C452	QFLC1HJ-472ZM	4700PF 50V METAL.MYLAR	
	C453	QFLB1HJ-821	820PF 50V MYLARCAP.	
	C454	QFLB1HJ-821	820PF 50V MYLARCAP.	
	C455	QETB1HM-105	1MF 50V ALE.CAP.	
	C456	QETB1HM-105	1MF 50V ALE.CAP.	
	C457	QFV81HJ-104	0.1MF 50V THINFILMCAP.	A BS EF EN G GI VX
	C458	QFV81HJ-104	0.1MF 50V THINFILMCAP.	A BS EF EN G GI VX
	C459	QETB1CM-226	22MF 16V E.CAP.	
	C460	QETB1CM-226	22MF 16V E.CAP.	
	C485	QETB1HM-475E	4.7MF 50V E.CAP.	
	C486	QETB1HM-475E	4.7MF 50V E.CAP.	
	C487	QETB1HM-475E	4.7MF 50V E.CAP.	
	C488	QETB1HM-475E	4.7MF 50V E.CAP.	
	C489	QETB1HM-475E	4.7MF 50V E.CAP.	
	C490	QETB1HM-475E	4.7MF 50V E.CAP.	
	C495	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C551	QETC1EM-106ZM	10MF 25V ALE.CAP.	
	C552	QETB1CM-476	47MF 16V ALE.CAP.	
	C553	QCVB1CM-103Y	0.01MF 16V CER.CAP.	
	C554	QETB1AM-476	47MF 10V E.CAP.	
	C555	QETC1EM-106ZM	10MF 25V ALE.CAP.	
	C556	QCVB1CM-103Y	0.01MF 16V CER.CAP.	
	C557	QCVB1CM-103Y	0.01MF 16V CER.CAP.	
	C564	QETB1CM-476	47MF 16V ALE.CAP.	
	C565	QFLC1HJ-103ZM	0.01MF 50V METAL.MYLAR	
	C566	QETC1EM-106ZM	10MF 25V ALE.CAP.	
	C571	QETB1CM-476	47MF 16V ALE.CAP.	
	C577	QETB1JM-107	100MF 63V ALE.CAP.	
	C578	QETB1HM-475E	4.7MF 50V E.CAP.	
	C584	QETB1HM-226E	22MF 50V E.CAP.	

⚠	Item	Parts Number	Description	Area
	C585	QETB1HM-226E	22MF 50V E.CAP.	
	C586	QETB1JM-476	47MF 63V ALE.CAP.	
	C588	QCVB1CM-103Y	0.01MF 16V CER.CAP.	
	C1701	QCVB1CM-103Y	0.01MF 16V CER.CAP.	BS EF EN G GI VX
		RESISTORS		
	R111	QRD161J-472	4.7K 1/6W CARBONRES.	BS EF EN G GI VX
	R112	QRD161J-472	4.7K 1/6W CARBONRES.	BS EF EN G GI VX
	R113	QRD161J-472	4.7K 1/6W CARBONRES.	BS EF EN G GI VX
	R114	QRD161J-103	10K 1/6W CARBONRES.	BS EF EN G GI VX
	R115	QRD161J-222	2.2K 1/6W CARBONRES.	
	R116	QRD161J-104	100K 1/6W CARBONRES.	
	R117	QRD161J-222	2.2K 1/6W CARBONRES.	BS EF EN G GI VX
	R118	QRD167J-332	3.3K 1/6W CARBONRES.	
	R119	QRD161J-221	220 1/6W CARBONRES.	
	R121	QRD161J-391	390 1/6W CARBONRES.	
	R122	QRD167J-272	2.7K 1/6W CARBONRES.	
	R123	QRD161J-102	1K 1/6W CARBONRES.	
	R124	QRD161J-681	680 1/6W CARBONRES.	
	R125	QRD167J-332	3.3K 1/6W CARBONRES.	
	R126	QRD161J-221	220 1/6W CARBONRES.	
	R130	QRD167J-562	5.6K 1/6W CARBONRES.	BS EF EN G GI VX
	R135	QRD161J-101	100 1/6W CARBONRES.	BS EF EN G GI VX
	R135	QRD161J-470	47 1/6W CARBONRES.	A U UB UP US UT
	R146	QRD167J-560	56 1/6W CARBONRES.	
	R147	QRD161J-103	10K 1/6W CARBONRES.	
	R148	QRD161J-103	10K 1/6W CARBONRES.	
	R149	QRD161J-273	27K 1/6W CARBONRES.	
	R150	QRD161J-103	10K 1/6W CARBONRES.	
	R153	QRD161J-103	10K 1/6W CARBONRES.	
	R154	QRD161J-103	10K 1/6W CARBONRES.	
	R155	QRD167J-562	5.6K 1/6W CARBONRES.	
	R157	QRD161J-103	10K 1/6W CARBONRES.	
	R158	QRD161J-333	33K 1/6W CARBONRES.	
	R159	QRD161J-561	560 1/6W CARBONRES.	
	R160	QRD161J-123	12K 1/6W CARBONRES.	A U UB UP US UT
	R160	QRD161J-273	27K 1/6W CARBONRES.	EF EN G GI VX
	R160	QRD167J-332	3.3K 1/6W CARBONRES.	BS
	R161	QRD161J-124	120K 1/6W CARBONRES.	U UB UP US UT
	R161	QRD161J-184	180K 1/6W CARBONRES.	A BS EF EN G GI VX
	R162	QRD161J-124	120K 1/6W CARBONRES.	U UB UP US UT
	R162	QRD161J-184	180K 1/6W CARBONRES.	A BS EF EN G GI VX
	R163	QRD167J-152	1.5K 1/6W CARBONRES.	
	R164	QRD167J-152	1.5K 1/6W CARBONRES.	
	R165	QRD161J-184	180K 1/6W CARBONRES.	U UB UP US UT
	R165	QRD161J-274	270K 1/6W CARBONRES.	A BS EF EN G GI VX
	R166	QRD161J-184	180K 1/6W CARBONRES.	U UB UP US UT
	R166	QRD161J-274	270K 1/6W CARBONRES.	A BS EF EN G GI VX
	R167	QRD161J-393	39K 1/6W CARBONRES.	BS EF EN G GI VX
	R167	QRD161J-473	47K 1/6W CARBONRES.	A
	R167	QRD161J-683	68K 1/6W CARBONRES.	U UB UP US UT
	R168	QRD161J-103	10K 1/6W CARBONRES.	
	R169	QRD161J-103	10K 1/6W CARBONRES.	
	R170	QRD167J-822	8.2K 1/6W CARBONRES.	
	R173	QRD161J-242	2.4K 1/6W CARBONRES.	EF EN G GI VX
	R173	QRD167J-272	2.7K 1/6W CARBONRES.	A BS U UB UP US UT
	R174	QRD161J-242	2.4K 1/6W CARBONRES.	EF EN G GI VX
	R174	QRD167J-272	2.7K 1/6W CARBONRES.	A BS U UB UP US UT
	R175	QRD161J-182	1.8K 1/6W CARBONRES.	A BS U UB UP US UT
	R175	QRD161J-242	2.4K 1/6W CARBONRES.	EF EN G GI VX
	R176	QRD161J-182	1.8K 1/6W CARBONRES.	A BS U UB UP US UT
	R176	QRD161J-242	2.4K 1/6W CARBONRES.	EF EN G GI VX
	R179	QRD167J-562	5.6K 1/6W CARBONRES.	
	R180	QRD161J-472	4.7K 1/6W CARBONRES.	
	R181	QRD161J-103	10K 1/6W CARBONRES.	
	R182	QRD161J-103	10K 1/6W CARBONRES.	
	R183	QRD161J-103	10K 1/6W CARBONRES.	
	R184	QRD161J-472	4.7K 1/6W CARBONRES.	
	R185	QRD161J-103	10K 1/6W CARBONRES.	
	R188	QRD161J-472	4.7K 1/6W CARBONRES.	
	R190	QRD161J-472	4.7K 1/6W CARBONRES.	
	R194	QRD161J-473	47K 1/6W CARBONRES.	
	R195	QRD161J-473	47K 1/6W CARBONRES.	
	R196	QRD161J-222	2.2K 1/6W CARBONRES.	
	R197	QRD161J-472	4.7K 1/6W CARBONRES.	
	R198	QRD167J-822	8.2K 1/6W CARBONRES.	
⚠	R202	QRZ0077-470	47 1/4W FUSIBLERES.	
	R271	QRD161J-104	100K 1/6W CARBONRES.	
	R272	QRD161J-104	100K 1/6W CARBONRES.	
	R280	QRD161J-221	220 1/6W CARBONRES.	
	R281	QRD161J-224	220K 1/6W CARBONRES.	
	R282	QRD161J-224	220K 1/6W CARBONRES.	
	R283	QRD161J-100	10 1/6W CARBONRES.	
	R284	QRD161J-100	10 1/6W CARBONRES.	
	R285	QRD161J-393	39K 1/6W CARBONRES.	
	R286	QRD161J-393	39K 1/6W CARBONRES.	
⚠	R287	QRD14CJ-6R8SX	6.8 1/4W UNF.CARBONR	
⚠	R288	QRZ0077-100	10 1/4W FUSIBLERES.	
	R290	QRD167J-332	3.3K 1/6W CARBONRES.	
	R292	QRD161J-221	220 1/6W CARBONRES.	
	R293	QRD167J-511	510 1/6W CARBONRES.	
	R294	QRD161J-561	560 1/6W CARBONRES.	
	R296	QRD161J-104	100K 1/6W CARBONRES.	
	R297	QRD161J-222	2.2K 1/6W CARBONRES.	
	R298	QRD161J-561	560 1/6W CARBONRES.	BS EF EN G GI VX
	R301	QRD161J-103	10K 1/6W CARBONRES.	
	R302	QRD161J-103	10K 1/6W CARBONRES.	
	R303	QRD167J-153	15K 1/6W CARBONRES.	
	R304	QRD167J-153	15K 1/6W CARBONRES.	
	R315	QRD161J-103	10K 1/6W CARBONRES.	
	R316	QRD161J-103	10K 1/6W CARBONRES.	
	R317	QRD161J-103	10K 1/6W CARBONRES.	
	R318	QRD161J-103	10K 1/6W CARBONRES.	
	R319	QRD161J-103	10K 1/6W CARBONRES.	
	R320	QRD161J-103	10K 1/6W CARBONRES.	
	R321	QRD161J-103	10K 1/6W CARBONRES.	
	R322	QRD161J-103	10K 1/6W CARBONRES.	
	R323	QRD167J-562	5.6K 1/6W CARBONRES.	
	R324	QRD167J-562	5.6K 1/6W CARBONRES.	
	R325	QRD167J-562	5.6K 1/6W CARBONRES.	
	R326	QRD167J-562	5.6K 1/6W CARBONRES.	
	R331	QRD167J-682	6.8K 1/6W CARBONRES.	
	R332	QRD167J-682	6.8K 1/6W CARBONRES.	
	R333	QRD167J-151	150 1/6W CARBONRES.	
	R334	QRD167J-151	150 1/6W CARBONRES.	
	R347	QRD161J-221	220 1/6W CARBONRES.	
	R348	QRD161J-221	220 1/6W CARBONRES.	
	R349	QRD161J-821	820 1/6W CARBONRES.	
	R350	QRD161J-821	820 1/6W CARBONRES.	
	R351	QRD167J-272	2.7K 1/6W CARBONRES.	
	R352	QRD167J-272	2.7K 1/6W CARBONRES.	
	R353	QRD161J-103	10K 1/6W CARBONRES.	
	R354	QRD161J-103	10K 1/6W CARBONRES.	
	R355	QRD161J-243	24K 1/6W CARBONRES.	
	R356	QRD161J-243	24K 1/6W CARBONRES.	
	R357	QRD161J-683	68K 1/6W CARBONRES.	
	R358	QRD161J-683	68K 1/6W CARBONRES.	
	R359	QRD167J-223	22K 1/6W CARBONRES.	
	R360	QRD167J-223	22K 1/6W CARBONRES.	
	R361	QRD161J-393	39K 1/6W CARBONRES.	
	R362	QRD161J-393	39K 1/6W CARBONRES.	
	R363	QRD161J-221	220 1/6W CARBONRES.	
	R364	QRD161J-221	220 1/6W CARBONRES.	
	R367	QRD161J-274	270K 1/6W CARBONRES.	
	R368	QRD161J-274	270K 1/6W CARBONRES.	
	R369	QRD161J-470	47 1/6W CARBONRES.	
	R370	QRD161J-470	47 1/6W CARBONRES.	
	R371	QRD161J-203	20K 1/6W CARBONRES.	
	R372	QRD161J-203	20K 1/6W CARBONRES.	
	R375	QRD161J-103	10K 1/6W CARBONRES.	
	R376	QRD161J-103	10K 1/6W CARBONRES.	

⚠	Item	Parts Number	Description	Area
	R377	QRD161J-221	220 1/6W CARBONRES.	
	R378	QRD161J-221	220 1/6W CARBONRES.	
	R379	QRD161J-912	9.1K 1/6W CARBONRES.	
	R380	QRD161J-912	9.1K 1/6W CARBONRES.	
	R381	QRD161J-221	220 1/6W CARBONRES.	
	R382	QRD161J-221	220 1/6W CARBONRES.	
	R385	QRD161J-274	270K 1/6W CARBONRES.	
	R386	QRD161J-274	270K 1/6W CARBONRES.	
	R387	QRD161J-470	47 1/6W CARBONRES.	
	R388	QRD161J-470	47 1/6W CARBONRES.	
	R391	QRD161J-203	20K 1/6W CARBONRES.	
	R392	QRD161J-203	20K 1/6W CARBONRES.	
	R401	QRD161J-222	2.2K 1/6W CARBONRES.	
	R402	QRD161J-222	2.2K 1/6W CARBONRES.	
	R403	QRD161J-271	270 1/6W CARBONRES.	
	R404	QRD161J-271	270 1/6W CARBONRES.	
	R405	QRD161J-471	470 1/6W CARBONRES.	
	R406	QRD161J-471	470 1/6W CARBONRES.	
	R409	QRD161J-221	220 1/6W CARBONRES.	BS EF EN G GI VX
	R410	QRD161J-104	100K 1/6W CARBONRES.	U UB UP US UT
	R411	QRD161J-473	47K 1/6W CARBONRES.	U UB UP US UT
	R412	QRD161J-473	47K 1/6W CARBONRES.	U UB UP US UT
	R413	QRD161J-473	47K 1/6W CARBONRES.	U UB UP US UT
	R414	QRD161J-473	47K 1/6W CARBONRES.	U UB UP US UT
	R415	QRD161J-473	47K 1/6W CARBONRES.	U UB UP US UT
	R416	QRD161J-473	47K 1/6W CARBONRES.	U UB UP US UT
	R417	QRD161J-104	100K 1/6W CARBONRES.	U UB UP US UT
	R419	QRD167J-332	3.3K 1/6W CARBONRES.	U UB UP US UT
	R420	QRD167J-332	3.3K 1/6W CARBONRES.	U UB UP US UT
	R421	QRD167J-332	3.3K 1/6W CARBONRES.	U UB UP US UT
	R422	QRD167J-332	3.3K 1/6W CARBONRES.	U UB UP US UT
	R423	QRD161J-271	270 1/6W CARBONRES.	U UB UP US UT
	R424	QRD161J-472	4.7K 1/6W CARBONRES.	U UB UP US UT
	R425	QRD161J-472	4.7K 1/6W CARBONRES.	U UB UP US UT
	R427	QRD161J-104	100K 1/6W CARBONRES.	U UB UP US UT
	R428	QRD161J-104	100K 1/6W CARBONRES.	U UB UP US UT
	R429	QRD161J-103	10K 1/6W CARBONRES.	U UB UP US UT
	R430	QRD161J-103	10K 1/6W CARBONRES.	U UB UP US UT
	R431	QRD161J-471	470 1/6W CARBONRES.	
	R432	QRD161J-471	470 1/6W CARBONRES.	
	R433	QRD161J-103	10K 1/6W CARBONRES.	
	R434	QRD161J-103	10K 1/6W CARBONRES.	
	R435	QRD161J-103	10K 1/6W CARBONRES.	
	R436	QRD161J-103	10K 1/6W CARBONRES.	
	R440	QRD161J-102	1K 1/6W CARBONRES.	
	R451	QRD161J-222	2.2K 1/6W CARBONRES.	
	R452	QRD161J-222	2.2K 1/6W CARBONRES.	
	R453	QRD161J-222	2.2K 1/6W CARBONRES.	
	R454	QRD161J-222	2.2K 1/6W CARBONRES.	
	R455	QRD161J-392	3.9K 1/6W CARBONRES.	
	R456	QRD161J-392	3.9K 1/6W CARBONRES.	
	R457	QRD161J-182	1.8K 1/6W CARBONRES.	
	R458	QRD161J-182	1.8K 1/6W CARBONRES.	
	R459	QRD161J-273	27K 1/6W CARBONRES.	A BS EF EN G GI VX
	R460	QRD161J-273	27K 1/6W CARBONRES.	A BS EF EN G GI VX
	R461	QRD161J-333	33K 1/6W CARBONRES.	A BS EF EN G GI VX
	R462	QRD161J-333	33K 1/6W CARBONRES.	A BS EF EN G GI VX
	R470	QRD161J-271	270 1/6W CARBONRES.	A BS EF EN G GI VX
	R470	QRD161J-561	560 1/6W CARBONRES.	U UB UP US UT
	R472	QRD161J-271	270 1/6W CARBONRES.	U UB UP US UT
	R485	QRD161J-273	27K 1/6W CARBONRES.	
	R486	QRD161J-273	27K 1/6W CARBONRES.	
	R487	QRD161J-473	47K 1/6W CARBONRES.	
	R488	QRD161J-473	47K 1/6W CARBONRES.	
	R490	QRD161J-103	10K 1/6W CARBONRES.	U UB UP US UT
	R491	QRD161J-103	10K 1/6W CARBONRES.	U UB UP US UT
	R551	QRD161J-103	10K 1/6W CARBONRES.	
	R552	QRD161J-392	3.9K 1/6W CARBONRES.	
⚠	R553	QRZ0077-100	10 1/4W FUSIBLERES.	
⚠	R554	QRZ0077-100	10 1/4W FUSIBLERES.	

⚠	Item	Parts Number	Description	Area
	R555	QRD161J-472	4.7K 1/6W CARBONRES.	
	R556	QRD167J-153	15K 1/6W CARBONRES.	
	R559	QRD161J-242	2.4K 1/6W CARBONRES.	
	R563	QRD167J-152	1.5K 1/6W CARBONRES.	
	R576	QRD161J-472	4.7K 1/6W CARBONRES.	
⚠	R579	QRD14CJ-3R3S	3.3 1/4W UNF.CARBONR	
	R580	QRD161J-221	220 1/6W CARBONRES.	
	R581	QRD161J-362	3.6K 1/6W CARBONRES.	
⚠	R582	PTH61G25AR4R7M	POSITIVETHE	
⚠	R584	QRD14CJ-1R5SX	1.5 1/4W UNF.CARBONR	U UB UP US UT
	R585	QRD161J-104	100K 1/6W CARBONRES.	
	VR301	QVPA603-501A	500 TRIMMERRES.	
	VR302	QVPA603-501A	500 TRIMMERRES.	
	VR303	QVPA603-501A	500 TRIMMERRES.	
	VR304	QVPA603-501A	500 TRIMMERRES.	
	VR305	QVPA603-104A	100K TRIMMERRES.	
	VR306	QVPA603-104A	100K TRIMMERRES.	
	VR307	QVPA603-104A	100K TRIMMERRES.	
	VR308	QVPA603-104A	100K TRIMMERRES.	
	VR309	QVPA603-104A	100K TRIMMERRES.	
	VR310	QVPA603-104A	100K TRIMMERRES.	
	VR311	QVPA603-503A	50K VARIABLERES.	
	VR312	QVPA603-503A	50K VARIABLERES.	
		OTHERS		
		FMMW1015-102	PRINTEDBOARD	
	J401	EMN00TV-209A	PINJACK	
	L101	EQL4007-1R0	INDUCTOR	
	L102	EQL4007-150T	INDUCTOR	BS EF EN G GI VX
	L301	ENZ6002-012	OSCILLATORCOIL	
	L303	EQL2106-562	INDUCTOR	
	L304	EQL2106-562	INDUCTOR	
	L305	EQL2106-223	INDUCTOR	
	L306	EQL2106-223	INDUCTOR	
	L401	EQL4007-2R2T	INDUCTOR	
	S401	QSS7A12-E01	SLIDESWITCH	BS EF EN G GI VX
	T105	EQT2140-017	I.F.TRANSFORMER	
	T107	ECB1560-010	CERAMICFILTER	
	T111	EQR7121-004	RFCOIL	A U UB UP US UT
	T111	EQR7121-006	RFCOIL	BS EF EN G GI VX
	AT101	EMB41YV-302K	ANTENNATERMINAL	BS EF EN G GI VX
	AT101	FMMB10YV-401K	ANTENNATERMINAL	A U UB UP US UT
	CF101	ECB2118-007R	CERAMICFILTER	BS EF EN G GI VX
	CF101	FMCB2123-001	CERAMICFILTER	A U UB UP US UT
	CF102	ECB2118-007R	CERAMICFILTER	BS EF EN G GI VX
	CF102	FMCB2123-001	CERAMICFILTER	A U UB UP US UT
	CN301	VMC0314-P08	CONNECTTERMINAL	
	CN302	VMC0314-P08	CONNECTTERMINAL	
	CN331	EMV7155-106R	CONNECTTERMINAL	
	CN332	EMV7155-106R	CONNECTTERMINAL	
	CN401	VMC0163-035	CONNECTTERMINAL	
	CN402	VMC0075-003	CONNECTOR	
	CN502	EMV7125-010R	MALECONNECTOR	
	CN513	EMV5167-116	CONNECTTERMINAL	
	CN514	EMV5167-126	CONNECTTERMINAL	
	EP102	E409182-001SM	EARTHTERMINAL	
	FE101	EAF2203-004	FRONTEND	A U UB UP US UT
	FE101	EAF2203-005	FRONTEND	BS EF EN G GI
	FE101	EAF2302-002	FRONTEND	VX
	FS445	E3400-431	FELTSPACER	BS EF EN G GI VX
	LP102	EQF0102-001	LOWPASSFILTER	BS EF EN G GI VX
	LP141	EQF0101-013	LOWPASSFILTER	
	LP142	EQF0101-013	LOWPASSFILTER	
	WR636	QWE370-054K4K	VINYL WIRE	
	WR637	QWE370-054K4K	VINYL WIRE	
	XT102	ECX0007-200KC	CRYSTAL	
	XT103	ECX0000-456KR	CERAMICRESONATOR	

Electrical Parts List (ENB-235)

⚠	Item	Parts Number	Description	Area
		I.C.S		
	IC601	AN8806SB	I.C(MONO-ANALOG)	
	IC602	BA6897FPW	I.C(MONO-ANALOG)	
	IC603	MN35510	I.C(DIGI-MOS)	
	IC701	MN172412J6N1	I.C(MICRO-COMPUTER)	A BS EF EN G GI U UB UP US UT
	IC701	MN172412J6N2	I.C.	VX
	IC703	SPS-420-1	INFRAREDDETECTUNIT	
	IC951	BA7725S	I.C(MONO-ANALOG)	U UB UP US UT
	IC952	BU9251S	I.C(M)	U UB UP US UT
	IC954	XRA15218N	I.C(MONO-ANALOG)	U UB UP US UT
		DIODES		
	D701	1SS133	SI.DIODE	
	D702	1SS133	SI.DIODE	
	D703	1SS133	SI.DIODE	
	D704	1SS133	SI.DIODE	
	D705	1SS133	SI.DIODE	
	D707	1SS133	SI.DIODE	
	D708	1SS133	SI.DIODE	
	D709	1SS133	SI.DIODE	
	D712	1SS133	SI.DIODE	U UB UP US UT VX
	D713	1SS133	SI.DIODE	VX
	D714	1SS133	SI.DIODE	A
	D715	SLR-342MCA47	L.E.D.	
	D716	SLR-342MCA47	L.E.D.	
	D717	SLR-342MCA47	L.E.D.	
	D718	1SS133	SI.DIODE	
	D719	1SS133	SI.DIODE	
	D720	1SS133	SI.DIODE	
	D721	1SS133	SI.DIODE	
	D722	1SS133	SI.DIODE	
	D723	1SS133	SI.DIODE	
	D724	1SS133	SI.DIODE	
	D725	1SS133	SI.DIODE	
	D726	SLR-342MCA47	L.E.D.	
	D727	SLR-342MCA47	L.E.D.	
	D728	SLR-342MCA47	L.E.D.	
	D729	SLR-342MCA47	L.E.D.	
	D730	SLR-342MCA47	L.E.D.	
	D731	SLR-342MCA47	L.E.D.	
	D732	SLR-342MCA47	L.E.D.	
	D733	SLR-342MCA47	L.E.D.	
	D734	SLR-342VC3F	L.E.D.	
	D735	SLR-342MCA47	L.E.D.	
	D736	SLR-342MCA47	L.E.D.	
	D737	SLR-342MCA47	L.E.D.	
	D738	SLR-342MCA47	L.E.D.	
	D739	SLR-342MCA47	L.E.D.	
	D740	SLR-342MCA47	L.E.D.	
	D741	SLR-342MCA47	L.E.D.	
	D742	SLR-342VC3F	L.E.D.	
	D743	SLA-380LT	L.E.D.	BS
	D743	SLR-342VC3F	L.E.D.	A EF EN G GI U UB UP US UT VX
	D744	SIR-56SB3F	L.E.D.	
	D951	MTZ5.1JC	ZENER DIODE	U UB UP US UT
		TRANSISTORS		
	Q601	2SA952(L,K)	SI.TRANSISTOR	
	Q631	2SA952(L,K)	SI.TRANSISTOR	
	Q706	DTA114TS	DIGITALTRANSISTOR	
	Q707	DTA114TS	DIGITALTRANSISTOR	
	Q708	DTA114YS	DIGITALTRANSISTOR	
	Q709	DTA114YS	DIGITALTRANSISTOR	
	Q710	DTA114YS	DIGITALTRANSISTOR	
	Q711	DTA114YS	DIGITALTRANSISTOR	
	Q712	DTC114YS	DIGITALTRANSISTOR	
	Q713	DTC114YS	DIGITALTRANSISTOR	
	Q714	2SC1740S(R,S)	SI.TRANSISTOR	
	Q715	2SA933S(RS)	SI.TRANSISTOR	
	Q720	DTC114ES	DIGITALTRANSISTOR	
	Q721	DTC114ES	DIGITALTRANSISTOR	
	Q951	DTC144ES	DIGITALTRANSISTOR	U UB UP US UT
	Q952	DTC144ES	DIGITALTRANSISTOR	U UB UP US UT
	Q953	DTC144ES	DIGITALTRANSISTOR	U UB UP US UT
	Q954	DTC144ES	DIGITALTRANSISTOR	U UB UP US UT
	Q955	2SD2144S(VW)	SI.TRANSISTOR	U UB UP US UT
	Q956	2SD2144S(VW)	SI.TRANSISTOR	U UB UP US UT
	Q957	DTA144ES	DIGITALTRANSISTOR	U UB UP US UT
	Q958	DTC144ES	DIGITALTRANSISTOR	U UB UP US UT
	Q959	2SD1302	SI.TRANSISTOR	U UB UP US UT
		CAPACITORS		
	C602	QCZ0205-155	1.5MF 25V C.CAP.	
	C604	QETB1AM-107	100MF 10V ALE.CAP.	
	C605	QETC1EM-106ZM	10MF 25V ALE.CAP.	
	C606	QCBB1HK-102Y	1000PF 50V CER.CAP.	
	C607	QCBB1HK-102Y	1000PF 50V CER.CAP.	
	C608	QETB1HM-105	1MF 50V ALE.CAP.	
	C609	QCBB1HK-101Y	100PF 50V CER.CAP.	
	C610	QFLC1HJ-273ZM	0.027MF 50V METAL.MYLAR	
	C611	QCXB1CM-472Y	4700PF 16V CER.CAP.	
	C612	QCVB1CM-103Y	0.01MF 16V CER.CAP.	
	C614	QFLC1HJ-104ZM	0.1MF 50V MYLARCAP.	
	C615	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C616	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C617	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C618	QCXB1CM-222Y	2200PF 16V CER.CAP.	
	C619	QCBB1HK-271Y	270PF 50V CER.CAP.	
	C620	QCSB1HJ-470Y	47PF 50V CER.CAP.	
	C621	QCBB1HK-821Y	820PF 50V CER.CAP.	
	C622	QETB1AM-476	47MF 10V E.CAP.	
	C623	QFLC1HJ-104ZM	0.1MF 50V MYLARCAP.	
	C625	QCZ0205-155	1.5MF 25V C.CAP.	
	C631	QETB1AM-477	470MF 10V E.CAP.	
	C632	QETB1AM-107	100MF 10V ALE.CAP.	
	C635	QCS31HJ-221Z	220PF 50V CER.CAP.	
	C636	QCS31HJ-221Z	220PF 50V CER.CAP.	
	C637	QCS31HJ-221Z	220PF 50V CER.CAP.	
	C651	QCSB1HJ-120Y	12PF 50V CER.CAP.	
	C652	QCSB1HJ-120Y	12PF 50V CER.CAP.	
	C653	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C655	QCC31EM-473ZV	0.047MF 25V CER.CAP.	
	C661	QCBB1HK-471Y	470PF 50V CER.CAP.	
	C662	QCC31EM-473ZV	0.047MF 25V CER.CAP.	
	C663	QFLC1HJ-223ZM	0.022MF 50V METAL.MYLAR	
	C664	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C665	QFV71HJ-334ZM	0.33MF 50V THINFILMCAP.	
	C671	QCXB1CM-222Y	2200PF 16V CER.CAP.	
	C672	QCXB1CM-222Y	2200PF 16V CER.CAP.	
	C673	QEK61AM-227ZM	220MF 10V ALE.CAP.	
	C674	QCHB1EZ-223	0.022MF 25V CER.CAP.	
	C676	QCBB1HK-102Y	1000PF 50V CER.CAP.	
	C683	QCBB1HK-331Y	330PF 50V CER.CAP.	
	C701	QCVB1CM-103Y	0.01MF 16V CER.CAP.	
	C702	QCT25CH-330Z	33PF 50V CER.CAP.	
	C703	QCVB1CM-103Y	0.01MF 16V CER.CAP.	
	C704	QER50JM-107	100MF 6.3V ALE.CAP.	
	C707	QETB1HM-226E	22MF 50V E.CAP.	
	C709	QER61HM-226	22MF 50V ALE.CAP.	
	C710	QCVB1CM-103Y	0.01MF 16V CER.CAP.	
	C712	QER50JM-107	100MF 6.3V ALE.CAP.	
	C714	QEAD0HZ-479A	47000MF E.CAP.	
	C718	QCGB1HK-102	1000PF 50V CER.CAP.	

⚠	Item	Parts Number	Description	Area
	C719	QCVB1CM-103Y	0.01MF 16V CER.CAP.	
	C951	QETB1CM-226	22MF 16V E.CAP.	U UB UP US UT
	C952	QFV81HJ-104	0.1MF 50V THINFILMCAP.	U UB UP US UT
	C953	QETB1HM-474	0.47MF 50V E.CAP.	U UB UP US UT
	C954	QCXB1CM-562Y	5600PF 16V CER.CAP.	U UB UP US UT
	C955	QCGB1HK-821	820PF 50V CER.CAP.	U UB UP US UT
	C956	QFV81HJ-183	0.018MF 50V THINFILMCAP	U UB UP US UT
	C957	QFV81HJ-104	0.1MF 50V THINFILMCAP.	U UB UP US UT
	C958	QCXB1CM-682Y	6800PF 16V CER.CAP.	U UB UP US UT
	C959	QCGB1HK-821	820PF 50V CER.CAP.	U UB UP US UT
	C960	QCXB1CM-562Y	5600PF 16V CER.CAP.	U UB UP US UT
	C961	QFV81HJ-183	0.018MF 50V THINFILMCAP	U UB UP US UT
	C962	QETB1HM-474	0.47MF 50V E.CAP.	U UB UP US UT
	C963	QFV81HJ-104	0.1MF 50V THINF ILMCAP.	U UB UP US UT
	C964	QETC1HM-224ZM	0.22MF 50V E.CAP.	U UB UP US UT
	C965	QETC1HM-224ZM	0.22MF 50V E.CAP.	U UB UP US UT
	C966	QETB1CM-227	220MF 16V ALE.CAP.	U UB UP US UT
	C967	QFV81HJ-104	0.1MF 50V THINFILMCAP.	U UB UP US UT
	C968	QCBB1HK-221Y	220PF 50V CER.CAP.	U UB UP US UT
	C969	QETB1CM-107	100MF 16V ALE.CAP.	U UB UP US UT
	C970	QFV81HJ-103	0.01MF 50V THINFILMCAP	U UB UP US UT
	C971	QCBB1HK-221Y	220PF 50V CER.CAP.	U UB UP US UT
	C972	QCBB1HK-221Y	220PF 50V CER.CAP.	U UB UP US UT
	C974	QCBB1HK-471Y	470PF 50V CER.CAP.	BS EF EN G GI VX
	C975	QCBB1HK-471Y	470PF 50V CER.CAP.	BS EF EN G GI VX
	C977	QETB1HM-475E	4.7MF 50V E.CAP.	U UB UP US UT
	C981	QCGB1HK-102	1000PF 50V CER.CAP.	U UB UP US UT
	C982	QEK51HM-475	4.7MF 50V ALE.CAP.	U UB UP US UT
	C983	QCBB1HK-101Y	100PF 50V CER.CAP.	U UB UP US UT
	C985	QETB1CM-226	22MF 16V E.CAP.	U UB UP US UT
	C986	QETB1CM-227	220MF 16V ALE.CAP.	U UB UP US UT
	C989	QCBB1HK-101Y	100PF 50V CER.CAP.	U UB UP US UT
	C991	QCBB1HK-101Y	100PF 50V CER.CAP.	U UB UP US UT
	C992	QCVB1CM-103Y	0.01MF 16V CER.CAP.	U UB UP US UT
	C993	QETB1HM-475E	4.7MF 50V E.CAP.	U UB UP US UT
	C995	QETB1HM-475E	4.7MF 50V E.CAP.	U UB UP US UT
	C999	QETB1HM-475E	4.7MF 50V E.CAP.	U UB UP US UT
	TC701	ENZ1003-015	0.1MF TRIMMERCAPA	
		RESISTORS		
	R601	QRD161J-622	6.2K 1/6W CARBONRES.	
	R602	QRD167J-562	5.6K 1/6W CARBONRES.	
	R605	QRD167J-134	130K 1/6W CARBONRES.	
	R606	QRD161J-913	91K 1/6W CARBONRES.	
	R607	QRD161J-273	27K 1/6W CARBONRES.	
	R609	QRD161J-114	110K 1/6W CARBONRES.	
	R610	QRD167J-154	150K 1/6W CARBONRES.	
	R612	QRD161J-103	10K 1/6W CARBONRES.	
	R613	QRD167J-121	120 1/6W CARBONRES.	
	R614	QRD161J-100	10 1/6W CARBONRES.	
	R615	QRD161J-120	12 1/6W CARBONRES.	
	R616	QRD161J-910Y	91 1/6W CARBONRES.	
	R631	QRD161J-331	330 1/6W CARBONRES.	
	R632	QRD161J-101	100 1/6W CARBONRES.	
	R641	QRD161J-563	56K 1/6W CARBONRES.	
	R642	QRD161J-123	12K 1/6W CARBONRES.	
	R643	QRD167J-822	8.2K 1/6W CARBONRES.	
	R644	QRD167J-223	22K 1/6W CARBONRES.	
	R645	QRD167J-223	22K 1/6W CARBONRES.	
	R646	QRD161J-182	1.8K 1/6W CARBONRES.	
	R647	QRD167J-562	5.6K 1/6W CARBONRES.	
	R651	QRD161J-102	1K 1/6W CARBONRES.	
	R652	QRD161J-102	1K 1/6W CARBONRES.	
	R653	QRD161J-102	1K 1/6W CARBONRES.	
	R654	QRD161J-102	1K 1/6W CARBONRES.	
	R661	QRD161J-104	100K 1/6W CARBONRES.	
	R663	QRD161J-124	120K 1/6W CARBONRES.	

⚠	Item	Parts Number	Description	Area
	R664	QRD161J-681	680 1/6W CARBONRES.	
	R666	QRD161J-220	22 1/6W CARBONRES.	
	R671	QRD161J-102	1K 1/6W CARBONRES.	
	R672	QRD161J-102	1K 1/6W CARBONRES.	
	R683	QRD161J-125	1.2M 1/6W CARBONRES.	
	R691	QRD161J-472	4.7K 1/6W CARBONRES.	
	R692	QRD161J-271	270 1/6W CARBONRES.	
	R701	QRD161J-221	220 1/6W CARBONRES.	
	R703	QRD161J-221	220 1/6W CARBONRES.	
	R705	QRD161J-221	220 1/6W CARBONRES.	
	R707	QRD161J-104	100K 1/6W CARBONRES.	
	R708	QRD161J-470	47 1/6W CARBONRES.	
	R709	QRD161J-103	10K 1/6W CARBONRES.	
	R710	QRD161J-103	10K 1/6W CARBONRES.	
	R712	QRD161J-101	100 1/6W CARBONRES.	
	R713	QRD161J-103	10K 1/6W CARBONRES.	
	R714	QRD167J-121	120 1/6W CARBONRES.	
	R716	QRD167J-121	120 1/6W CARBONRES.	
	R718	QRD167J-121	120 1/6W CARBONRES.	
	R719	QRD161J-102	1K 1/6W CARBONRES.	
	R720	QRD167J-121	120 1/6W CARBONRES.	
	R722	QRD167J-151	150 1/6W CARBONRES.	
	R723	QRD167J-151	150 1/6W CARBONRES.	
	R724	QRD167J-121	120 1/6W CARBONRES.	
	R724	QRD167J-620	62 1/6W CARBONRES.	
	R725	QRD161J-221	220 1/6W CARBONRES.	
	R726	QRD161J-221	220 1/6W CARBONRES.	
	R727	QRD161J-221	220 1/6W CARBONRES.	
	R728	QRD161J-101	100 1/6W CARBONRES.	
	R729	QRD161J-221	220 1/6W CARBONRES.	A EF EN G GI U UB UP US UT VX
	R729	QRD161J-391	390 1/6W CARBONRES.	BS
	R730	QRD167J-272	2.7K 1/6W CARBONRES.	
	R731	QRD167J-121	120 1/6W CARBONRES.	
	R732	QRD161J-103	10K 1/6W CARBONRES.	
	R733	QRD161J-103	10K 1/6W CARBONRES.	
	R734	QRD161J-103	10K 1/6W CARBONRES.	
	R737	QRD167J-121	120 1/6W CARBONRES.	
	R738	QRD161J-103	10K 1/6W CARBONRES.	
	R739	QRD161J-103	10K 1/6W CARBONRES.	
	R741	QRD161J-103	10K 1/6W CARBONRES.	
	R742	QRD161J-103	10K 1/6W CARBONRES.	
	R951	QRD167J-152	1.5K 1/6W CARBONRES.	U UB UP US UT
	R952	QRD161J-123	12K 1/6W CARBONRES.	U UB UP US UT
	R953	QRD161J-103	10K 1/6W CARBONRES.	U UB UP US UT
	R954	QRD161J-103	10K 1/6W CARBONRES.	U UB UP US UT
	R955	QRD161J-103	10K 1/6W CARBONRES.	U UB UP US UT
	R956	QRD161J-472	4.7K 1/6W CARBONRES.	U UB UP US UT
	R957	QRD161J-103	10K 1/6W CARBONRES.	U UB UP US UT
	R958	QRD161J-103	10K 1/6W CARBONRES.	U UB UP US UT
	R959	QRD161J-103	10K 1/6W CARBONRES.	U UB UP US UT
	R960	QRD167J-223	22K 1/6W CARBONRES.	U UB UP US UT
	R961	QRD161J-623	62K 1/6W CARBONRES.	U UB UP US UT
	R962	QRD167J-153	15K 1/6W CARBONRES.	U UB UP US UT
	R963	QRD161J-303Y	30K 1/6W CARBONRES.	U UB UP US UT
	R964	QRD161J-105	1M 1/6W CARBONRES.	U UB UP US UT
	R965	QRD167J-682	6.8K 1/6W CARBONRES.	U UB UP US UT
	R966	QRD161J-331	330 1/6W CARBONRES.	U UB UP US UT
	R967	QRD161J-563	56K 1/6W CARBONRES.	U UB UP US UT
	R971	QRD161J-104	100K 1/6W CARBONRES.	U UB UP US UT
	R973	QRD161J-103	10K 1/6W CARBONRES.	U UB UP US UT
	R974	QRD161J-103	10K 1/6W CARBONRES.	U UB UP US UT
	R975	QRD161J-512	5. 1K 1/6W CARBONRES.	U UB UP US UT
	R976	QRD161J-512	5. 1K 1/6W CARBONRES.	U UB UP US UT
	R977	QRD161J-104	100K 1/6W CARBONRES.	U UB UP US UT
	R978	QRD161J-104	100K 1/6W CARBONRES.	U UB UP US UT

⚠	Item	Parts Number	Description	Area
	R979	QRD161J-221	220 1/6W CARBONRES.	U UB UP US UT
	R980	QRD161J-104	100K 1/6W CARBONRES.	U UB UP US UT
	R982	QRD161J-243	24K 1/6W CARBONRES.	U UB UP US UT
	R984	QRD161J-103	10K 1/6W CARBONRES.	U UB UP US UT
	R985	QRD161J-103	10K 1/6W CARBONRES.	U UB UP US UT
	R986	QRD161J-103	10K 1/6W CARBONRES.	U UB UP US UT
	R987	QRD161J-221	220 1/6W CARBONRES.	U UB UP US UT
	R988	QRD161J-221	220 1/6W CARBONRES.	U UB UP US UT
	VR701	QVAA72B-E54B	50KVARIABLERES.	U UB UP US UT
		OTHERS		
		EMW10628-002	PRINTEDBOARD	
	J701	QMS3RA0-EE0S	MICROPHONEJACK	U UB UP US UT
	J702	QMS3RA0-EE0S	MICROPHONEJACK	U UB UP US UT
	J951	VMJ4024-001	HEADPHONEJACK	
	S701	ESP0001-023M	TACTSWITCH	
	S702	ESP0001-023M	TACTSWITCH	
	S703	ESP0001-023M	TACTSWITCH	
	S704	ESP0001-023M	TACTSWITCH	
	S705	ESP0001-023M	TACTSWITCH	
	S706	ESP0001-023M	TACTSWITCH	
	S707	ESP0001-023M	TACTSWITCH	
	S708	ESP0001-023M	TACTSWITCH	
	S709	ESP0001-023M	TACTSWITCH	
	S710	ESP0001-023M	TACTSWITCH	
	S711	ESP0001-023M	TACTSWITCH	
	S712	ESP0001-023M	TACTSWITCH	
	S713	ESP0001-023M	TACTSWITCH	
	S714	ESP0001-023M	TACTSWITCH	
	S715	ESP0001-023M	TACTSWITCH	
	S716	ESP0001-023M	TACTSWITCH	
	S717	ESP0001-023M	TACTSWITCH	
	S718	ESP0001-023M	TACTSWITCH	
	S719	ESP0001-023M	TACTSWITCH	
	S720	ESP0001-023M	TACTSWITCH	
	S721	ESP0001-023M	TACTSWITCH	
	S722	ESP0001-023M	TACTSWITCH	
	S723	ESP0001-023M	TACTSWITCH	
	S724	ESP0001-023M	TACTSWITCH	
	S725	ESP0001-023M	TACTSWITCH	
	S726	ESP0001-023M	TACTSWITCH	
	S727	ESP0001-023M	TACTSWITCH	
	S728	ESP0001-023M	TACTSWITCH	
	S729	ESP0001-023M	TACTSWITCH	
	S730	ESP0001-023M	TACTSWITCH	
	X651	ECX0169-344EF	CRYSTAL	
	X701	ECX0006-000KNJ	CRYSTAL	
	X951	ECX0000-400KS	CERAMICRESONATOR	U UB UP US UT
	BK701	E309500-001SM	FLHOLDER	
	CN411	VMC0163-R35	CONNECTTERMINAL	
	CN601	EMV7144-015R	CONNECTTERMINAL	
	CN601	EMV7171-115R	CONNECTTERMINAL	
	CN602	EMV5109-006A	CONNECTTERMINAL	
	CN603	VMC0163-R07	CONNECTTERMINAL	
	CN604	VMC0163-R11	CONNECTTERMINAL	
	CN701	VMC0314-S10	CONNECTTERMINAL	
	CN711	VMC0314-P10	CONNECTTERMINAL	
	FE683	E3400-431	FELTSPACER	
	FL701	ELU0001-210	FLUORESCENTDISPLAYTUBE	
	FS683	E3400-431	FELTSPACER	
	FS701	E3400-439	FELTSPACER	
	FS702	E3400-439	FELTSPACER	
	FW701	VWSC10-133K3K	FLATWIREASSY	
	FW702	VWSC08-133K3K	FLATWIREASSY	
	FW703	VWSC10-163K3K	FLATWIREASSY	
	FW704	EWR33B-20SST	FLATWIREASSY	
	FW706	EWS33A-B406	SOCKETWIREASSY	

⚠	Item	Parts Number	Description	Area
	FW901	EWR39B-10LST	FLATWIREASSY	
	JS701	QSJ4002-E04J5	ROTARYSWITCH	
	K1703	ENZ8101-007	INDUCTOR	BS EF EN G GI VX
	SP601	VYH7237-001	I.C.COVER	
	SP602	VYH7237-003	I.C.COVER	
	SP603	VYH7237-003	I.C.COVER	
	SP701	VYH7653-001	SPRING	
	TP601	QMV5004-002K	PLUGASSY	
	TW631	EWF102-051	TERMINALWIRE	

Electorical Parts List (Changer Control P.C.B.)

⚠	Item	Parts Number	Description	Area
		I.C.S		
	IC801	UPD65612GB-208	I.C(M)	
	IC802	TA8409S	I.C(MONO-ANALOG)	
	IC803	TA8409S	I.C(MONO-ANALOG)	
		CAPACITORS		
	C801	QEK51AM-107	100MF 10V AL E.CAP.	
	C802	QEK51EM-475	4.7MF 25V AL E.CAP.	
	C803	QFLB1HJ-102	1000PF 50V MYLAR CAP.	
	C804	QCFB1HZ-104Y	0.10MF CER.CAP.(S)	
	C805	QCVB1CM-103Y	.010MF 16V CER.CAP.	
	C806	QEK51CM-476	47MF 16V AL E.CAP.	
	C807	QEK51CM-476	47MF 16V AL E.CAP.	
	C808	QFLB1HJ-102	1000PF 50V MYLAR CAP.	
	C810	QCZ0205-155	1.5MF C.CAP.	
	C811	QCZ0205-155	1.5MF C.CAP.	
	C813	QCVB1CM-103Y	0.010MF 16V CER.CAP.	
	C815	QCFB1HZ-104Y	0.1MF 50V CER.CAP.	
	C816	QCFB1HZ-104Y	0.1MF 50V CER.CAP.	
	C817	QCFB1HZ-104Y	0.1MF 50V CER.CAP.	
	C818	QCFB1HZ-104Y	0.1MF 50V CER.CAP.	
	C819	QCFB1HZ-104Y	0.1MF 50V CER.CAP.	
	C820	QCFB1HZ-104Y	0.1MF 50V CER.CAP.	
	C821	QCBB1HK-102Y	1000PF 50V CER.CAP.	
		RESISTORS		
	R805	QRD161J-102	1.0K 1/6W CARBON RES.	
	R806	QRD161J-471	470 1/6W CARBON RES.	
	R807	QRD161J-471	470 1/6W CARBON RES.	
	R808	QRD161J-102	1.0K 1/6W CARBON RES.	
	R810	QRD161J-684	680K 1/6W CARBON RES.	
	R811	QRD161J-105	1.0M 1/6W CARBON RES.	
	R813	QRD161J-102	1.0K 1/6W CARBON RES.	
	R814	QRD161J-102	1.0K 1/6W CARBON RES.	
	R815	QRD161J-102	1.0K 1/6W CARBON RES.	
	R816	QRD161J-102	1.0K 1/6W CARBON RES.	
	R817	QRD161J-102	1.0K 1/6W CARBON RES.	
	R818	QRD161J-102	1.0K 1/6W CARBON RES.	
	R819	QRD161J-102	1.0K 1/6W CARBON RES.	
	R820	QRD161J-102	1.0K 1/6W CARBON RES.	
	R821	QRD161J-102	1.0K 1/6W CARBON RES.	
	R822	QRD161J-102	1.0K 1/6W CARBON RES.	
	R823	QRD161J-102	1.0K 1/6W CARBON RES.	
	R824	QRD161J-102	1.0K 1/6W CARBON RES.	
	R825	QRD161J-102	1.0K 1/6W CARBON RES.	
	R826	QRD161J-102	1.0K 1/6W CARBON RES.	
	R827	QRD161J-102	1.0K 1/6W CARBON RES.	
	R828	QRD161J-102	1.0K 1/6W CARBON RES.	
	R829	QRD161J-102	1.0K 1/6W CARBON RES.	
	R830	QRD161J-102	1.0K 1/6W CARBON RES.	
	R832	QRD161J-181	180 1/6W CARBON RES.	
	R833	QRD161J-102	1.0K 1/6W CARBON RES.	
	R834	QRD161J-102	1.0K 1/6W CARBON RES.	
	R839	QRD167J-332	3.3K 1/6W CARBON RES.	
	R840	QRD167J-562	5.6K 1/6W CARBON RES.	
		OTHERS		
		QSEC001-E03	LEVER SWITCH	
		SBSF2608Z	TAPPING SCREW	
		VMC0289-S07	CONNECTOR	
		VMW1377-004X	PW BOARD	
		VYH7237-001	IC HOLDER	
	L801	VQP0018-100	INDUCTOR	
	L802	VQP0033-100Z	INDUCTOR	
	L803	VQP0033-100Z	INDUCTOR	
	L804	VQP0033-100Z	INDUCTOR	
	CN801	VMC0163-R10	CONNECT TERMINAL	
	CN802	VMC0289-P07	CONNECT TERMINAL	
	CN803	VMC0324-12310	CONNECT TERMINAL	

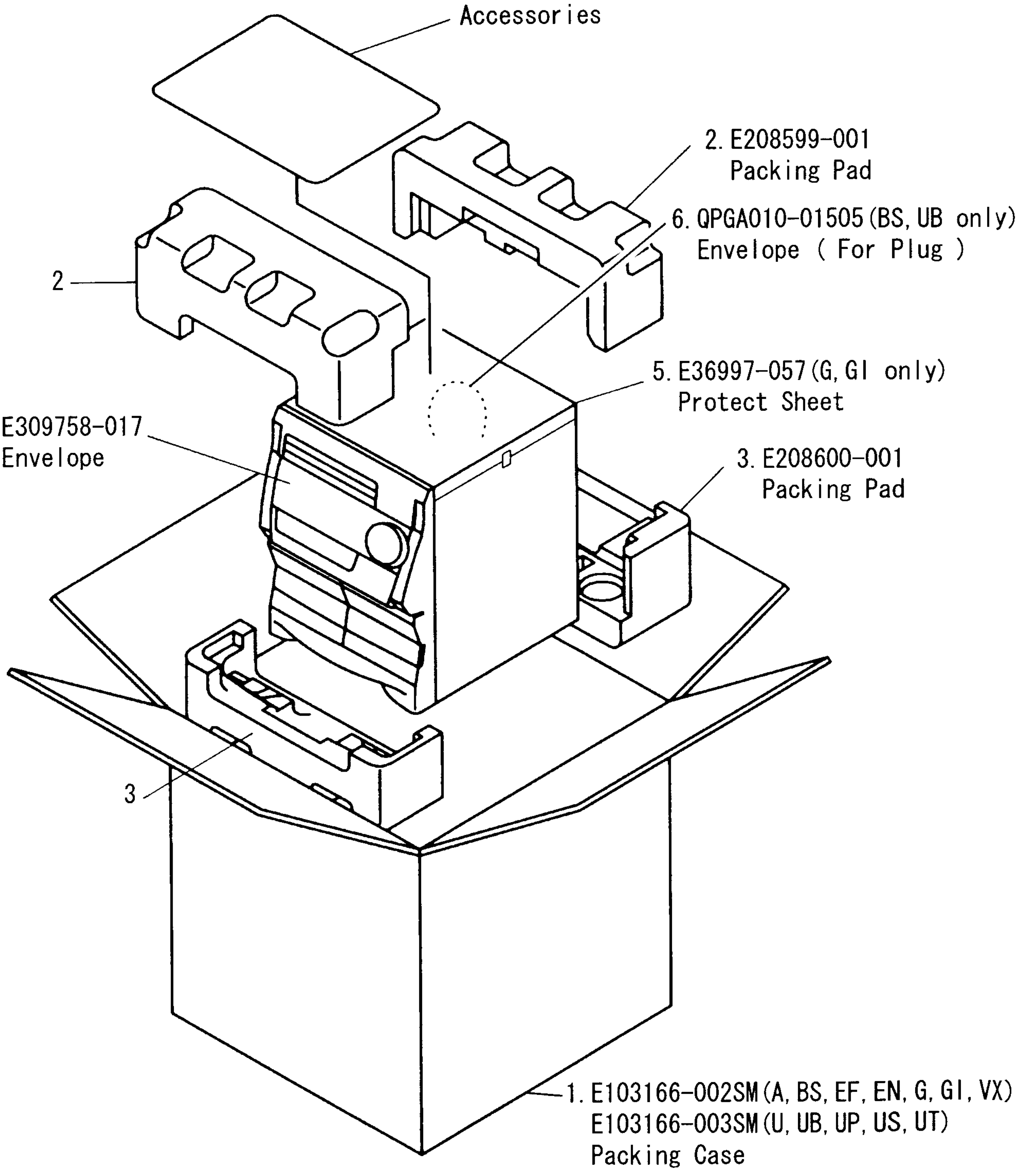
Accessories List

Block No. M5MM

⚠	Item	Parts Number	Parts Name	Q'ty	Description	Area
	1	E30580-2465A	INSTRUCTION BOOK	1		EF G GI
		E30580-2466A	INSTRUCTION BOOK	1		U UB US UT
		E30580-2467A	INSTRUCTION BOOK	1		A BS
		E30580-2468A	INSTRUCTION BOOK	1		EN
		E30580-2469A	INSTRUCTION BOOK	1		UP
		E30580-2498A	INSTRUCTION BOOK	1		VX
	2	E309758-002	POLY BAG	1		
	3	EQB4001-015	LOOP ANTENNA	1		
	4	BT-20134	WARRANTY CARD	1		G
		BT-54003-1	WARRANTY CARD	1		BS
		BT-56001-1	WARRANTY CARD	1		A
		BT-56004-3	WARRANTY CARD	1		UP
	5	EWP201-011	ANTENNA WIRE	1		A U UB UP US UT
		EWP503-001	ANTENNA WIRE	1		BS EF EN G GI VX
	6	E43486-340A	SAFETY SHEET	1		BS
	7	ENZ2202-001	SIEMENS PLUG	1		US
	8	ENZ2203-001	ADAPTOR PLUG	1		U UT
	9	RM-SED5TU	WIRE-LESS REMOTE CONTROL	1		A BS EF EN G GI VX
		RM-SED5TXU	WIRE-LESS REMOTE CONTROL	1		U UB UP US UT
	10	UM-3(DJ)-2PSA	BATTERY	1		

Packing Materials and Part Numbers

Block No. M6MM


Accessories
2. E208599-001
Packing Pad
6. QPGA010-01505(BS, UB only)
Envelope (For Plug)
2
5. E36997-057(G, GI only)
Protect Sheet
4. E309758-017
Envelope
3. E208600-001
Packing Pad
3
1. E103166-002SM(A, BS, EF, EN, G, GI, VX)
E103166-003SM(U, UB, UP, US, UT)
Packing Case